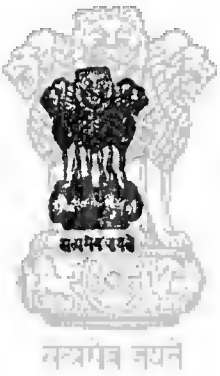
REPORT
OF
THE ADHOC COMMITTEE
ON
AUTOMOBILE INDUSTRY



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CONTENTS

CONTENTS—*contd.*

CHAPTER I

INTRODUCTION

1. This Committee was set up by the Government of India in the Ministry of Commerce and Industry, under Resolution No. A.E.Ind. 1(11)/59, dated 8th April, 1959 with the following terms of reference:—

(a) To review the progress of the automobile industry and automobile ancillary industries and recommend measures to increase the indigenous content of the different vehicles in the shortest possible time, keeping in view the targets and schedules envisaged in 1956, when the manufacturing programmes of the different producers were approved;

(b) To recommend measures to be taken to reduce the cost to the consumer of different vehicles (car, jeep and truck) under manufacture by the automobile industry and suggest the most appropriate pattern of organisation of the future expansion of the industry to ensure low-cost production;

(c) To examine the feasibility of producing a low-cost passenger car within the price range of Rs. 5,000 to Rs. 7,000 including within the scope of such examination not only schemes previously presented to Government, but also other models of cars that have been developed in different countries and suggest ways and means of manufacturing such a car in the country;

(d) To recommend targets of production of different types of vehicles for the Third Five Year Plan; and

(e) To indicate the financial implications including foreign exchange, of development programmes that might be suggested under (a), (b) and (c) above.

2.1. By their letter No. A.E.Ind 1(11)/59, dated 24th April, 1959, the Government of India desired that "in their studies relating to the manufacture of trucks, the Committee should bear in mind the growing surplus of motor spirit that is likely to arise over the next seven years and the need for diminishing rather than increasing this surplus".

2.2. The constitution of the Committee was as stated below:—

Chairman :

1. Shri L. K. Jha, I.C.S. . . . . Additional Secretary, Ministry of C. & I.

Members :

2. Rr. Adm. Daya Shanker . . . . Director-General of Ordnance Factories.

Members

3.	Dr. S. K. Muranjan	Member, Tariff Commission.
4.	Dr. B. D. Kalelkar	Senior Industrial Adviser, Ministry of C. & I., Development Wing.
5.	Prof. B. N. Das Gupta	Chartered Accountant, Calcutta.
6.	Shri D. D. Suri, I.A.S.	Deputy Secretary, Ministry of T. & C.
7.	Shri M. M. Gupta	Dy. Transport Commissioner, U. P. Government.
8.	Shri V. K. R. Menon, I.C.S., (appointed by Min. of C. & I. Notification No. A.E. Ind. 1 (11)/59, dated 16th July, 1959.)	Director, International Labour Office (India Branch), New Delhi.

Secretary:

9.	Shri V. P. S. Menon	Industrial Adviser (Engg.), Ministry of C. & I., Development Wing.

3.1. Prior to the appointment of this Committee there had been a number of studies and enquiries into the potentials and problems of the automobile industry. The first was in 1945 when a Panel on Automobiles and Tractors was constituted to make recommendations on developing the manufacture of automobiles and tractors in India. The panel submitted its report in 1947. The principal recommendations of the panel related to adjustments in import duties. The panel favoured the adoption of the principle of a graduated differential in the customs duty levied on various individual components, the differential depending on the time required to establish manufacture in India. The panel also recommended that raw materials, certain forgings, castings, etc., as well as the machinery and capital equipment required by automobile manufacturers should be allowed to be imported free of customs duty. No specific action appears to have been taken on these recommendations. However, in the Industrial Policy Resolution of April 1948, automobiles and tractors were classified amongst industries which would be subject to regulation and control by the Central Government. In the following year, Government decided that import of motor vehicles should be allowed only in C.K.D. condition and that further increase in assembly capacity beyond what was in existence prior to 1948 was not to be encouraged. From 1st April, 1950, customs duty on certain parts which were being manufactured in the country and which were likely to be manufactured in the course of the next few years was raised pending an enquiry into the question of grant of protection and assistance to the industry.

3.2. In June, 1950 Government appointed an Automobile Expert Committee to examine the position in regard to the inclusion of particular parts of automobiles in categories bearing different rates of import duty and make recommendations for their reclassification. The revised classification as recommended by the Committee was accepted and given effect to in March, 1951.

3.3. By their Resolution of 29th March 1952, Government about the Tariff Commission to undertake an enquiry into the automobile industry and to make recommendations relating to its development and protection. The Commission was helped in its task by an expert from West Germany, Mr. Vorwig. The Tariff Commission submitted its report to Government in April 1953. Along with it, Government also received the report of Mr. Vorwig which was later published. Mr. Vorwig's report brought out in clear terms what an automobile manufacturer must do in order to be considered a manufacturer and not an assembler. It also emphasised the importance of securing a large volume of production without which the cost of production was likely to be high. The Commission recommended that in order to lower the costs of production in the country, demand should be concentrated on a few firms who undertook basic manufacture according to an approved time-table. The Commission recommended a scheme of progressive manufacture of components during the next 5 years for four types of passenger cars and four types of commercial vehicles which were considered necessary to meet the country's requirements. As regards import duties, the Commission recommended a flat rate of duty on all components. Government accepted the main recommendations of the Commission with a few modifications. As a result, some of the firms which were engaged in pure assembly work and were not interested in manufacturing closed their operations in India and the remaining firms got specific programmes of manufacture approved by Government. As regards import duties Government took the view that a flat rate of duty on all components might not be conducive to the manufacture of new components, and this recommendation was, therefore, not implemented.

3.4. By a Resolution dated the 6th August, 1955, the Government of India in the Ministry of Commerce and Industry, had asked the Tariff Commission to enquire into and recommend the fair ex-works and selling prices of the automobiles under indigenous development and to indicate how such prices should be revised as the different phased manufacturing programmes made progress. The Commission made a comprehensive review of the industry since the time of its first report in 1953 and submitted its report on 6th October 1956. On the main question of automobile prices the Commission found that the margins between the current net dealer prices and the ex-works costs of the cars and trucks produced by the approved manufacturers were not, in general, excessive. The Commission also felt that a rigid system of price control was likely to have adverse repercussions on the development of the industry and, therefore, recommended that the interests of the consumer could be adequately safeguarded if the manufacturers were left free to vary prices at their discretion and periodic investigations were held into their costs and profits to ensure that their obligation not to charge excessive prices was actually fulfilled by them.

3.5. Apart from the enquiries referred to above, there have been her enquiries having a bearing on the automobile industry. These lated mainly to the development of the road transport industry a distinct from the automobile industry and covered issues such as levels of taxation and the part which the road transport system uld play in augmenting the transport facilities in the country.

4.1. The various enquiries to which we have referred to above were occasioned by the conditions and problems prevailing at the time each enquiry was made. The enquiries in 1945 and in 1950 were in the main concerned with the problem of adjustments in tariffs to provide a suitable base for the development of the automobile industry. The first Tariff Commission enquiry was undertaken when Government had made up their mind that something more positive was necessary to facilitate and accelerate the development of the automobile industry in the country. The report which the Tariff Commission then submitted, apart from making specific recommendations on individual points, had made a broad distinction between the production of commercial vehicles and passenger cars. In respect of the former, the Commission had emphasised the urgency of attaining self-sufficiency both from strategic as well as economic considerations. In regard to passenger cars, the Commission had appreciated that, with the limited volume of demand, costs, if the entire vehicle was to be made in India, were likely to be high and there was a danger of a vicious circle being set up whereby low demand led to higher costs and higher costs caused a further shrinking in demand. Accordingly, the Commission had taken the view that the development of the production of certain components such as body panels, need not be pressed forward with undue haste. The second Tariff Commission enquiry was at a time when the prices of Indian-made cars had already risen substantially and Government wanted to be satisfied that there was no profiteering on the part of the industry. The conclusion of the Tariff Commission was that the industry had not been selling its vehicles at inflated prices when its costs were taken into account. The Commission had felt that consumer's interests would be adequately safeguarded by laying down certain principles relating to ex-factory prices and the margins to be allowed to dealers and that without any formal price control the consumer would be able to get vehicles at prices which were fair in relation to domestic costs. The assumption underlying this recommendation of the Tariff Commission, of course, was that there would be no dearth of vehicles and as in the past the demand would be below the capacity of the industry to meet it. In other words, there would continue to be a reasonable amount of competition between the producers of vehicles in India and the market would continue to be a buyer's market.

4.2. The situation has, however, undergone a radical change since the Tariff Commission report. The shortage of foreign exchange made it necessary for Government to reduce the expenditure of foreign exchange on the import of these components which were not being produced by the Indian industry. Government decided that such foreign exchange as it was possible to release should be used by each firm for the production of that vehicle which consumed the lesser amount of foreign exchange per unit. This meant that instead of six models of passenger cars of varied sizes being available to the consumer only three models were left in regular production. Among the cars whose production was thus suspended were two which were in the more expensive range (Dodge and Standard Vanguard cars) and one which was in the cheapest range (the Baby Hindustan). Even so, the total production went down. This fall i

production coincided with an upward surge in demand both for passenger cars and for commercial vehicles. Orders booked with the dealers—all of which were not necessarily—indicated that a customer would have to wait for 12 to 24 months before getting the delivery of a car. In this situation not only was it not possible to do without price control and to leave the manufacturer (or dealer) free to vary prices, but it became necessary to introduce a Control Order under which manufacturers and dealers were required to deliver the vehicles in the order of registration and without discrimination.

5.1. When our Committee was set up, there was widespread complaint from the consumers about the inadequate supply of vehicles, entailing prolonged periods of waiting. There were also complaints about prices partly to the effect that vehicles were changing hands at prices which were far above those fixed by Government and partly that the prices, particularly for passenger cars, were such as to deny to an income group which should otherwise be owning cars the opportunity to do so.

5.2. At their first meeting on 4th May, 1959, the Committee decided to invite the views, through questionnaires, of automobile and ancillary manufacturing units, fleet owners, distributors, importers, entrepreneurs who had shown interest in the development of cheap cars and such other parties as are associated with the automobile industry. Two Sub-Committees, one consisting of Dr. B. D. Kalelkar, Rr. Adm. Daya Shanker and Shri M. M. Gupta and the other consisting of Shri D. D. Suri, Dr. S. K. Muranjan and Prof. B. N. Das Gupta, were made responsible for the preparation and issuance of questionnaires dealing with the technical aspect of the Committee's work and the targets of production and other related problems respectively. A list of those to whom questionnaires were issued and those from whom replies or memoranda were received is given in Appendix I.

5.3. The Chief Cost Accounts Officer, Government of India in the Ministry of Finance, examined the data relating to the costs of production of vehicles produced by Hindustan Motors, Tata Locomotive & Engineering Co. Ltd., Premier Automobiles, Mahindra & Mahindra Ltd., Ashok Leylands and Standard Motor Products of India Ltd., as well as of diesel engines produced by Simpson & Co. Ltd., and Automobile Products of India Ltd.

5.4. Public enquiries into the industry were held at Madras, Bombay, Calcutta and Delhi on 7th August, 19th August, 7th September and 23rd September, respectively.

5.5. Discussions were held with the representatives of various organisations and individuals connected with the automobile industry and also with such other entrepreneurs who have shown interest in the indigenous development of a car in the price range of Rs. 5,000 to Rs. 7,000.

5.6. A list of persons who attended the discussions is given in Appendix II.

6.1. The Committee had felt that in view of the great deal of interest which there was in the country on the subject of the production of a small car and as the final decision in the matter anyhow rested with Government, it would be an advantage to submit an interim report dealing mainly with that question. Accordingly, an interim report had been submitted to Government in October, 1959. This is our final report. In order to facilitate the reading of the report as a whole, we have tried to make this a self-contained and complete report in itself rather than a supplement to the interim report. Accordingly, much of the matter in this report is a reproduction of what had already been stated in our interim report. We have, however, made additions and alterations and also added new sections and chapters to the earlier report so as to cover the entire field of enquiry which was remitted to us.

6.2. The recommendations which we make in this report are primarily addressed to Government. We have, therefore, not thought it fit, except on a few points, to discuss our views and ideas with the representatives of the industry in order to ascertain their reactions. We, however, attach importance to such consultation with the industry before a final view is taken by the Government. We accordingly recommend that after a preliminary examination of our report such of our recommendations as appear to be *prima facie* acceptable should be put by Government to the industry as a whole or to the sections of the industry which are primarily concerned and their reactions and comments obtained before final decisions are taken.

CHAPTER II

SOME GENERAL OBSERVATIONS

Our enquiry began at a time when there was a great deal of consumer resentment against the industry. This was not altogether a new or sudden development. Ever since the automobile industry was given formal protection, the consumer had complained on one score or another. Initially the complaint was about the restriction of choice which was inherent in the shutting out of imports of built-up vehicles. Coupled with this there were complaints about the quality of the indigenous vehicle. Later the dissatisfaction was more acutely expressed about the increased prices at which vehicles were available. Then came complaints about the prices charged being higher than those officially fixed. And on top of it all this was the grievance that vehicles were just not available, except after periods of prolonged waiting.

2. While we are not concerned with the apportioning of blame, we feel it desirable to analyse the different causes which have contributed to the clamour of complaints which is commonly heard. The basic factors which play a role are the following:—

(a) The policy of protection.

(b) The availability of foreign exchange.

(c) The level of taxation.

(d) The performance of the industry.

3. It is inherent in the grant of protection to any industry that the consumer should be called upon to bear the extra burden. In the case of some industries the burden may be small and short-lived. In others, it may be heavier and more chronic in character. So far as the automobile industry is concerned, it was known right from the beginning that manufacture in India was likely to be more expensive and involve considerable sacrifices on the part of consumer. Units producing less than 10,000 vehicles a year could never offer the same kind of prices, the same variety of choice and the same improvement in design that vehicles imported from firms which produce vehicles in hundreds of thousands.

4. It was mainly on these considerations that the Tariff Commission in its first report on the automobile industry which resulted in the formal grant of protection to the industry had laid great emphasis on development along certain lines. It had pointed out that priority should be given to the manufacture of transport vehicles—trucks and buses—both for the reason that it was important to achieve self-sufficiency in them and because the demand for them was likely to rise to higher levels. In regard to passenger cars, the Tariff Commission had even discouraged the production of certain

types of components like body panels which require very substantial investment and whose cost of production would be terribly high unless the demand increases considerably.

5. Nevertheless in retrospect and having regard to the restrictions on the expenditure of foreign exchange which have now become so important, it is possible to say that if this industry had not been protected and developed, there would have been a far greater shortage of passenger cars in the country than is actually the case. If during the difficult period in regard to the foreign exchange in the early post-war years the consumer in a country like the United Kingdom which was itself a major producer of automobiles had to wait for years before getting delivery of a new car, there is little reason to expect that without an industry in the country the consumer would have fared better than he does today.

6. We feel therefore convinced that even from the point of view of the consumer the basic decision to grant protection to the industry was a sound one. This policy if it was to succeed had necessarily to place several restrictions on the consumer's freedom of choice and the price which he was called upon to pay. In trying to develop a domestic industry when the demand was so small that some of the biggest manufacturers in the world who already had their assembly plants in the country chose to withdraw altogether from India rather than undertake the manufacture of the vehicle, it was inevitable that the protection should be of a much higher degree than many other industries need. In order to nurture this industry in conditions which were far from favourable, not only protection from imports was needed, but also some restrictions on the free play of internal competition—particularly when even in internal competition a varying element of competition from imports was involved, because some vehicles had a higher proportion of imported components than others. Government, therefore, chose the policy of letting different firms to develop dissimilar vehicles so that for each type of vehicle the demand was concentrated rather than shared by different units. Even so practically every vehicle had a fairly close competitor in the country. In order that the producer who depended more on imports of components did not offer unfair competition to the one which had made greater progress, it was decided to be more liberal with foreign exchange for the import of components to the manufacturer who had made the greater progress. A cut in foreign exchange was further accepted as a weapon to be used against any firm which failed to progress in accordance with the programme of manufacture it had submitted to Government. There was of course the danger that if such a cut was made the consumer might be in difficulties. It was expected, however, that other suppliers would be easily able to fill the gap. If this expectation did not materialise the Tariff Commission had suggested that, if necessary, Government should arrange for additional import of vehicles through an agency like the State Trading Corporation to meet domestic demand.

7. The demand for automobiles has gone up considerably in recent years. Normally in such conditions it would have been desirable not only to allow the free play of competition among the

domestic producers but also to consider the possibility of allowing some imports to meet the excess of demand over domestic production. Unfortunately the foreign exchange crisis which intervened had made it necessary for Government to follow a much stricter import policy than is necessary or justified from the point of view of assistance to the domestic industry. Indeed one of the results of the foreign exchange crisis was to reduce the level of domestic production in 1958 which led to conditions of extreme shortage. These conditions have in turn led to various other measures including a greater control over distribution and prices. Although it is natural for the consumer to blame the industry for all his woes, it is important to recognise that in part at least the present difficulties are due to factors outside the industry itself and from which the industry itself has suffered. We discuss the problem of foreign exchange in so far as it affects the automobile user and the automobile industry in a separate chapter.

8. Taxation is yet another thing which creates a certain amount of confusion in the public mind. The indirect taxes, *e.g.*, excise duties on tyres and import duties on components which raise the price of Indian vehicles are not generally known in any precise terms to the public. Erroneous conclusions are often drawn by comparing prices in India inclusive of duties with prices abroad without duties. We have tried later in this report to analyse the incidence of taxation somewhat more fully.

9. Nothing that we have said in the preceding two paragraphs absolves a protected industry from its basic responsibilities towards the country and the consumer. In the rest of the Report we discuss the performance of the industry in some detail.

CHAPTER III

PROGRESS IN INDIGENOUS MANUFACTURE

There are three factors which require consideration in any assessment of the progress and performance of the automobile industry in India. First and foremost we have to consider the extent to which the automobile firms have been successful in replacing imports by indigenous manufacture. Secondly, we have to consider the question of prices and to see whether the industry has done everything possible to make vehicles available to consumer at reasonable prices. Thirdly, we should take into account the quality of the indigenous vehicle, the extent to which the industry is meeting the domestic demand and other similar factors. In this Chapter, we discuss the progress made by the industry in developing indigenous manufacture.

2.1. It is not very easy to devise a yard-stick to measure the progress made by the Indian industry in increasing the indigenous content of vehicles. It has been customary in the past to express the progress as a percentage of the components which are not being imported because of indigenous manufacture as compared with the value of the entire vehicle in a completely knocked-down (c.k.d.) condition. This comparison is not altogether satisfactory. Assembly charges account for a good proportion of the total price of a vehicle. The formula adopted in the past under-estimates the saving in foreign exchange effected by the industry.

2.2. Yet another factor distorts the picture to some extent. The reduction in the value of the complete c.k.d. pack on account of the non-importation of certain items whose production is developed in the country (the so-called deletion allowance) may not always represent the true value of what is being produced. In fact, it only indicates the extent to which the overseas supplier is prepared to reduce his price because certain components are no longer to be supplied by him. It is possible, therefore, that the reduction which he allows is less than the proportionate cost of the items in question.

2.3. An alternative to this would be to express the total c.i.f. value of all imported components as a percentage of the total ex-factory cost of a fully-assembled vehicle in India. This percentage would then represent the imported component of the vehicle and the balance would be the indigenous content. This method has the advantage of giving due credit to the Indian manufacturer for the assembly operation also. It has been used by Government on some recent occasions and is certainly an improvement on the formula which was being used earlier to which we have referred in para. 2.1.

2.4. There is however one defect in our view in the calculation referred to in para. 2.3. If the ex-factory cost of a fully-assembled

vehicle in India is taken as the base for comparison, then any increase in Indian cost would tend to reflect an increase in the indigenous content of the vehicle even though there may have been no further progress in manufacture. Thus, if the cost of tyres were doubled and as a result the cost of the assembled vehicle went up, the percentage of the imported element would tend to go down even without any further progress in Indian manufacture. We have, therefore, come to the conclusion that the best method of measuring progress would be to take the ex-factory price of the complete vehicle in the country of origin and express the ex-factory price of the components which are still being imported as a percentage thereof. The balance would provide the best yard-stick to measure the percentage of indigenous content in each vehicle. This method too cannot be said to be in any sense exact for the reasons set out in para. 2.2 above. It does however in our opinion provide a practical basis for measuring progress and eliminates most of the defects inherent in the calculations made in the past. In order to get an up-to-date statement of the indigenous content in different vehicles and engines we have worked on the basis of the import licensing figures for the period October, 1959 to March, 1960. The results are tabulated below:—

S. No.	Type of vehicle	Indigenous content (Oct. '59—March '60)
1.	Hindustan Ambassador	70·5%
2.	Fiat 1100	47·0%
3.	Dodge diesel with Perkins engine	68·0%
4.	Standard Ten	32·5%
5.	Tata Mercedes Benz Truck	64·0%
6.	Tata Mercedes Benz Bus	71·0%
7.	Leyland Comet	38·5%
8.	Jeep	65·0%
9.	Meadows Engine	50·0%
10.	Perkins P.6V Bare Exh. Diesel Engine	64·0%
11.	Bedford Diesel with Perkins Engine	46·0%

We would add that in the calculation set out above, when any component is produced by the Indian automobile manufacturer by importing semi-finished items like castings and forgings we have given him credit not for the full value of the component produced in India but only of the difference between the value of the semi-finished item imported and the finished component made therefrom. On the other hand, when raw materials like steel, non-ferrous metals and chemicals, have been imported we have not taken the value of these items as raising the imported content of the vehicle. This is because it is no part of the automobile manufacturers' responsibility to produce his own raw materials. For the production of steel it

is the public sector which is to ensure self-sufficiency, and for non-ferrous metals and chemicals other industries must meet the needs of the automobile industry. Indeed an increase in the consumption of raw materials proper is itself an indication of progress.

2.5. The progress in indigenous manufacture reflected by the figures we have furnished is not due to the automobile manufacturers alone. Ancillary industries have also played an important and significant part. The extent of reliance on supplies from ancillary industries varies from vehicle to vehicle. We feel that since it is desirable to encourage the development of ancillary industries and to give every inducement to automobile manufacturers to buy components from outside, in measuring the progress of different automobile units, no distinction should be made between units, who make more of the components required by them and units who buy more of such components from the ancillary industry.

3.1. There is another way of looking at the progress made by each firm and that is to compare their performance with their promise. Each firm, after the first Tariff Commission Enquiry, had given a manufacturing programme indicating what components it would make over what period of time. We have considered the possibility of making such a comparison, but we have found it difficult to do so for two reasons. The manufacturing programmes originally submitted have been revised from time to time with Government's approval. Secondly, since the beginning of 1957, it has not been possible for Government to give import licences for capital goods without stipulating certain difficult terms of deferred payment or asking the manufacturers to obtain their equipment from countries in which the Government had their own credit arrangements. The rate of progress has in other words been slowed down by difficulties of foreign exchange, though it must be added that even before the restrictions on import of capital goods were imposed, most manufacturers should have ordered all their plant and machinery in accordance with their approved programme of manufacture. In fact, inadequacy of rupee finance and technical competence have been a greater obstacle to progress than shortage of foreign exchange.

3.2. Even making allowances for factors referred to in the preceding paragraph, it is possible to relate the progress made by different firms to their original manufacturing programme and form some broad qualitative judgments. We shall begin first with the cars.

3.3. The Hindustan Ambassador is undoubtedly the leader in this field. Even in 1950-51 the important components of the engine, transmission and axle were made by Hindustan Motors. Castings for cylinder blocks, cylinder heads, etc., were of indigenous origin while forgings were being imported and machined. At the time of the first Tariff Commission enquiry the indigenous content was in the neighbourhood of 45 per cent. By the time of the second Tariff Commission Enquiry, *viz.*, in 1956, the indigenous content had gone up to 56 per cent. and to-day on the assessment made by us, it is a little above 70 per cent. They have in fact made all the components which an automobile manufacturer normally produces, except that

in repect of body panels they are only making certain panels and not others. The further progress in increasing the indigenous content of the Hindustan Ambassador will depend mainly on the development of ancillary industries and Hindustan Motors themselves have a relatively small contribution to make.

3.4. The Fiat 1100 was approved in November, 1953, for manufacture and the programme submitted to Government by Premier Automobiles aimed at the completion of the manufacture of the engine, transmission and axles by the end of 1956. At the time of the second Tariff Commission enquiry in 1956, the items (apart from tyres, tubes, batteries, etc., which were bought from other industries) which Premier Automobiles were making were the fuel tank, silencer assembly, and the radiator for a limited number of vehicles. Their present position on our assessment is that the vehicle is 47 per cent. indigenous. They are, therefore, very much behind schedule. They have, however, placed orders for the plant and machinery necessary to make the remaining items which were included in their programme of manufacture. Part of the machinery has already been installed.

3.5. Messrs. Standard Motors had begun in September, 1953 with the Standard Vanguard and they got approval to the manufacture of Standard 10 in October, 1954. In both cases the programme aimed at the completion of the manufacture of the engine, transmission and axle by the end of 1956. At the time of the Tariff Commission enquiry in 1956, they had made some components such as, water pumps, valve guides and fuel tanks and were machining cylinder heads and blocks for the Standard Vanguard. They had made little progress with their Standard 10. Subsequently their production of Vanguard has been discontinued and they have achieved 32·5 per cent. indigenous content in respect of Standard 10. They have placed orders for additional machinery and they have also developed foundry capacity in a subsidiary unit. Their progress has been the slowest.

3.6. Turning to the Jeep, Messrs. Mahindra & Mahindra had got their programme approved in June, 1954. It was their intention to manufacture the engine, transmission and axle by the end of 1958. At the time of the Tariff Commission enquiry they had made little progress but now they have achieved 65 per cent. indigenous content. The equipment for their completion of their programme has already been installed though they have yet to go into regular production of axles. This, we understand, was due to the delay in getting furnaces.

3.7. Turning to trucks, the Dodge truck of Premiers had a number of indigenous items including leaf springs, propeller shafts, cylinder assembly, etc. even in 1950-51. In September, 1953, following the first Tariff Commission enquiry, they got approval to their programme of manufacture which contemplated completion of the manufacture of engine, transmission, axles, etc. by the end of 1956. At the time of the second Tariff Commission enquiry in 1956, the

important components of the engine and gear box had been completed but the axle had yet to be developed. Much of their investment in the engine programme has however been a waste because the consumer demand has gone over to diesel engines and the Defence Ministry is also not likely to go in for their petrol trucks. Their present indigenous content is 68 per cent., but this takes account of the diesel engine supplied to them by other manufacturers. The two diesel engines produced independently in the country have themselves varying degree of indigenous content. However, so far as Premiers are concerned, since they have been asked to buy their engines from other manufacturers, it is but appropriate to treat the engine as indigenous in assessing the progress made by Premiers.

3.8. The Tata-Benz trucks of Telcos were approved in 1954 with a manufacturing programme which aimed at the engine, transmission, gear box and axles being made in India by the end of 1959. The first phase of their manufacturing programme was to commence in 1955. They had made little progress at the time of the second Tariff Commission enquiry but they have developed production of all the items which they had undertaken to produce in India by the end of 1959 according to their original schedule of manufacture. Their performance has been equal to their promise.

3.9. The Leyland Comet of Ashok Leyland was approved for manufacture in 1954 and the programme was to make the important components in India by the end of 1959. They have, however, achieved an indigenous content of 38·5 per cent. only according to our estimation. Part of the delay was due to a complete re-organization of the Company's capital structure which became necessary for certain reasons and caused a major dislocation of their programme. The machinery required for the programme has however been fully ordered and the programme should be completed in another twelve to fifteen months.

3.10. Bedford trucks were taken up by Hindustan Motors only in 1958 when they abandoned the Studebaker programme which they had started with. The machinery for the chassis, transmission and axles has been ordered in full and they have just started production of the chassis frame. They have lost no time in going ahead with this programme from the time it was approved.

4.1. It will be seen from what has been stated above that the progress made by different firms has not been uniform. Some vehicles like the Hindustan Ambassador car and the Tata-Benz truck have practically completed their manufacturing programmes while others have yet to do so. Standard Motors on the whole have been the slowest of vehicle manufacturers. All firms have, however, made commitments in respect of plant and machinery which will mean a steady improvement in their indigenous content over the next 15 to 18 months. In other words, most of the manufacturing programmes will be either complete or nearly so by the end of Second Five Year Plan.

4.2. This will not however mean that all these vehicles will become 100 per cent. indigenous by then. To a large extent, the

extent of indigenous manufacture achieved by each vehicle will depend on the simultaneous progress which is made by the ancillary industry. It would not be desirable, both for economic reasons and otherwise, to expect or permit the automobile manufacturers themselves to go in for the production of items which legitimately belong to the ancillary industry. The ancillary industry too is making good progress and expects to develop the production of the following items by 1961:—

Brake assembly, clutch assembly, steering assembly, wheels and rims, valves, oil seals, head and side lamps, ignition coils, instruments, electrical equipments and ball and taper bearings.

5.1. Components that are still likely to be imported in 1961 are:—

Distributors, windscreen glass, suspension coil-springs, torsion bar and body panels. (In the case of Hindustan Ambassador about 60 per cent. of the body panels is indigenous).

5.2. In this context, it should be remembered that there are certain items going into the vehicle, the production of which in India will entail a very substantial expenditure of foreign exchange for a nominal saving in imports and whose cost of production will also be too high and impose a heavy burden on the consumer. While some uneconomic investment could be justified on strategic considerations for trucks and jeeps, for passenger cars it would not be desirable. Care has, therefore, to be exercised in selecting the method and agency of developing these items.

5.3. The production of special types of glass needed for windscreens and side and rear doors are items whose production should be linked with the development of the glass industry rather than the automobile industry. In the case of these and similar items it is neither the automobile industry nor the ancillary industry which should take any responsibility.

5.4. The position of body panels requires separate consideration. It would have been economical and worthwhile in Indian conditions to instal the heavy presses for making body panels in one central unit to supply the requirements of the entire industry. The position has however been somewhat complicated by the fact that Hindustan Motors have already installed presses for some of the panels required for the Ambassador car. Premiers also, we understand have got import licences for the presses needed for the Fiat 1100. Whether for the balance of the necessary presses an attempt should be made to set up a central unit or whether each unit should be encouraged to have its own presses is a matter on which we suggest, a final view should be taken after considering the entire automobile production programme in the light of our report.

5.5. Subject to what has been stated above, the overall programme is in our view satisfactory. Only for the Standard Ten, there will still remain items on the import list, which are normally the responsibility of the main producer to develop. Whether Government should insist on Standard Motors taking up the manufacture

of these components for the Standard Ten is a matter to which we shall return later in this report.

6. It is of the utmost importance that the programme of production, which the industry has furnished should be tied up straightaway with the programme of import of capital goods. Many of them have already made the necessary commitments. To make sure of the ultimate position, each of the manufacturers should be asked to state in categorical terms whether he has already placed orders for the plant and machinery required to reduce imports to the levels indicated by him. If he has not, he should be asked to put in his import applications within a period of three months. This will enable the Government to look at the foreign exchange needed for the completion of the manufacturing programmes in its entirety. It will also be possible for Government to ensure that there is no avoidable duplication of expensive plant and machinery. If it appears desirable on a scrutiny of these applications that a common production arrangement should be made for components required by more than one unit, it should be possible to devise ways and means of ensuring such common production. We refer to this problem in our chapter on ancillary industries.

CHAPTER IV

ECONOMY AND EFFICIENCY IN PRODUCTION

1.1. Having reviewed the progress made by the industry in increasing the indigenous content of vehicles, we now turn to the question whether indigenous production is economic and efficient. This is clearly an important question. It is not enough for the industry to say that so much of the vehicle is made in India. It is also necessary to establish that what is made in India is as economic as it possibly could be. One obvious way of forming a quick judgment on the question is to compare Indian prices with prices abroad.

1.2. In doing so it is essential that the comparison should be of like with like. It is no use comparing, for example, the price of a 4 cylinder, 4 door, 10 H P. car in India with the price of "miniature" cars of much lower specifications which may be selling at cheaper prices abroad. The comparison should be between the basic price of the same vehicle in India and abroad.

1.3. Such a comparison is often made difficult by the fact that whereas in countries like the U.K. the element of taxation is shown as a distinct element in the shape of a purchase tax, in India the price of the vehicle ex-factory is inclusive of certain indirect taxes, particularly excise duties and import duties. According to an assessment made in the course of the cost examination which was undertaken at our instance, we found that in the price of the various vehicles produced in India, the amount due to excise duties and import duties was of the order indicated in the table below:—

CUSTOMS DUTY AND EXCISE DUTIES

	Actuals			
	Customs Duty	Excise Duty on Tyres	Excise Duty on Battery	Total
	Rs.	Rs.	Rs.	Rs.
Ambassador	833	120	8	961
Fiat	1,340	105	7	1,452
Standard 10	1,590	115	7	1,712
Vanguard MK. III	2,149	132	8	2,289
Standard Penant	1,685	115	7	1,807
Venguard Vignale	2,171.	132	8	2,311
Jeep	1,500	192	6	1,698
Bedford Petrol.	3,034	731	17	3,782
Bedford Diesel	2,268	731	17	3,016
Dodge Petrol	2,918.	731	19	3,668
Dodge Diesel	2,939	731	19	3,689
Tata Truck	3,352	731	30	4,113
Tata Bus	3,139	731	27	3,897
Leyland Comet	5,358	731	31	6,120

The customs duty figures relate to the period 1958-59 for which the cost examination was made. With the reduction in the number of components imported, amount of customs duty paid per vehicle would tend to go down and in the case of a vehicle like the Tata Truck the decline by now would be sizeable. On the other hand, the duties paid by the ancillary industry which also play a significant part in the cost structure are not included in the above table and would tend to increase the incidence of duty per vehicle. Thus the engine which Hindustan Motors and Premier Automobiles buy from Simpsons and API pay import duties amounting to a few hundred rupees per engine.

1.4. Another factor which makes comparison difficult is that the information which we possess about prices of vehicles overseas, is not always as complete and detailed as we would like it to be. The prices abroad which we know of are inclusive of dealers' commission and delivery charges. Then again, the same vehicle is sold in different overseas markets at different prices. Finally, there is the consideration that different vehicles in India have varying degrees of indigenous content. When all the components of a vehicle are imported, its final price reflects the cost of imported components and duties paid on them while in a vehicle with a high indigenous content the local costs become the dominent factors.

2.1. In view of the difficulties explained above, we have not tried to make a comparison of Indian prices with overseas prices in respect of all vehicles. We have instead made a comparative study for the complete vehicle in respect of only the Hindustan Ambassdor and the Mercedes Benz truck because these vehicles are in the respective fields of passenger cars and trucks the most advanced in indigenous manufacture.

2.2. To begin with the Hindustan Ambassador, its counterpart in the U.K. is the Morris Oxford. However, it would be difficult to maintain that the two vehicles are identical in all respects. The Hindustan has not always introduced the changes made from time to time in the Morris Oxford. This is fully understandable. We cannot in India keep modifying vehicles as often as in countries like the U.K. and the U.S.A. Nevertheless this makes the problem of comparison a little more difficult. The price of the Ambassador inclusive of dealers' commission is Rs. 11,554. The price of the Morris Oxford in England is £ 575 or Rs 7,667 without the purchase tax and £ 816 or Rs. 10,880 with the purchase tax to the consumer. If we take away the excise duty and the import duties from the price of the Ambassador, the comparable price inclusive of dealers' commission would be reduced by about Rs. 961 and give a dealer price of Rs. 10,593 as against the U.K. price less sales tax of Rs. 7,667. The U.K. price may include the delivery charges but that would not be a very large element. This means that if we eliminate the incidence of taxes in either case, the consumer price of the Hindustan Ambassador is 38 per cent. higher than the consumer price in the U.K. of the Morris Oxford.

2.3. In the case of the Tata Benz truck the selling prices in Germany are, we understand, approximately equal to Rs. 21,043. The selling prices in India today to the consumer (exclusive or transport charges

and sales tax) are Rs. 26,390. If the element of excise duties and import duties were eliminated, the comparable Indian price would be Rs. 22,277 which is 6 per cent. higher than the German price. However, as pointed out in para 1.3 above the customs duty in the case of the Tata Benz Truck to-day would have gone down and the price increase is, therefore, more like 12 to 15 per cent. above the German price.

3.1. The main elements which go into the price of a vehicle can be considered under the following heads:—

(a) Cost of production within the automobile factory.

(b) Cost of production in ancillary industry.

(c) Cost of imported items.

(d) The profit element.

(e) Distribution charges.

(f) Incidence of taxation.

3.2. Of the items listed above, we are in this chapter primarily concerned with (a) above, namely, the cost of production within the automobile factory itself. We examine the position in regard to ancillary industries in a separate chapter, while the other elements are referred to elsewhere in this report.

3.3. In order to get a clearer appreciation of the extent to which the higher cost of automobiles in India is due to factors within the automobile factory, we have tried to arrive at a figure of the net production by the manufacture in respect of each vehicle. To do so, we have deducted from the ex-factory cost of each vehicle the value of components and raw materials whether indigeous or imported which are bought from outside. Such a figure has a special significance because it indicates the extent to which the cost of the automobile is directly the responsibility of the automobile manufacture, and the extent to which the lowering of costs due to better efficiency or any other factor within the automobile factory will affect the ultimate price of the vehicle. The following table based on the Cost Report which relates to 1958-59 sets out the information:—

Models	Ex-factory cost	Cost of bought out component and materials—indigenous or imported	Elements within the Automobile factory (2—3)
1	2	3	4
	Rs.	Rs.	Rs.
Jeep	11,003	8,294	2,709
Bedford Petrol	15,466	14,687	779
Bedford Diesel	20,315	19,284	1,031

1	2	3	4
Dodge Diesel	22,869	21,361	1,508
Dodge Petrol	18,409	15,254	3,155
Tata Mercedes Truck . . .	22,278	17,655	4,623
Tata Mercedes Bus	23,208	17,244	5,964
Comet	30,218	26,625	3,593
Perkins Bare Exh. Engine . .	5,612	3,941	1,671
Meadows Exh. Engines . . .	6,203	5,507	696
Ambassador	9,678	6,332	3,346
Fiat	9,061	6,976	2,085
Standard 10	8,542	7,118	1,424
Standard Vanguard Mark III .	12,635	10,469	2,166

3.4. It will be seen from the above table that a relatively small percentage of the total price of a vehicle is in the hands of the automobile manufacturer himself. Thus, if all the services performed within the Hindustan Motors Ltd. were free of any payment, in other words, if the workers had to be paid no wages, if no provision had to be made on account of depreciation of machinery, and investors got no returns for their money whatever the reduction in the consumer price of the Hindustan cars would be about 30 per cent. and the vehicle would still be not cheaper than the Morris Oxford is in the U.K. In other words, the price in the U.K. is less than what Hindustan Motors have to spend before they themselves start their manufacturing and assembly operations. We consider it worth emphasizing this point because of somewhat distorted ideas on the subject which have public credence. The success and economy of the automobile industry depends on a variety of factors referred to in para 2.1 and not on the producer of the vehicle alone.

4.1. It is not possible for us to make a comparison of the in-factory costs in India with similar costs abroad. In respect of the latter all that we know is the price at which these components are being invoiced to the Indian manufacturers. This price necessarily includes the cost of raw materials as well as the profit margin of the overseas manufacturer. We have also reason to believe that the reduction in the import bill which is secured by deleting a particular item from the import list does not necessarily reflect what would be a reasonable

price for that particular component. It is, therefore difficult to make any comparison between the cost of production in the Indian factory and the cost of production in the factory overseas.

4.2. It is not in doubt, however, that the cost of production in Indian factories is higher than in the factories overseas. To what extent is this due to factors for which the industry itself is responsible and which are capable of rectification, and to what extent are there basic factors which create an insuperable problem are the important questions for us to consider.

4.3. One factor responsible for high costs in India which cannot in the short-term be remedied arises from historical causes. When the automobile industry began to be set up, the level of demand in the country was very low. The equipment which was then being installed was necessarily of a nature which would have limited capacity and result in higher costs than if production was based on special purpose machines capable of a large turn over. The majority of automobile factories are not equipped with machinery which is either well-balanced or capable of the most economic production. This is particularly true of the two oldest units, Hindustan Motors and Premier Automobiles. In contrast TELCOS have had the advantage of planning from the very start for a relatively large market and, therefore, their equipment is modern and suited for the production and turnover for which they are intended. In course of time no doubt improvements will take place and better and more suitable and more balanced equipment will replace the existing machinery. Neither the country nor the industry can however afford to go in for a wholesale re-equipment based on current or expected levels of demand. Therefore, upto a point there is a somewhat chronic reason for higher costs in the Indian industry which cannot be remedied in the near future.

4.4. We have in this context also to bear in mind the consideration that in general the higher the volume of production the greater would be the economies to be achieved by installing high speed special purpose machinery. So far as passenger cars are concerned the total demand in the country is less than what some of the more economic producers of cars in overseas countries turn out in a single factory in one month. This is a point which has an important bearing in planning future development. In general, the policy of concentrating the total domestic demand on a relatively few units which was accepted after the First Tariff Commission Enquiry continues to be essential for ensuring economic development. While we have throughout this report laid great emphasis on the importance of allowing competitive conditions to develop, on the whole it would continue to be desirable to provide for such competition by expanding the productive capacity of the existing units rather than by adding to the number of units.

4.5. Another reason why production costs in India tend to be high and which is outside the control of the industry itself is that many of the important raw materials are available to the Indian automobile producer at higher prices than those paid by his counterparts abroad. This is true both of indigenous raw materials and of imported raw materials. In the case of the latter, the main reasons for higher prices are two. Firstly, freight and import duties raise costs to the Indian

producer and secondly, in the case of items like steel, the manufacturers overseas have long term arrangements with domestic producers of steel which ensures them a steady supply at specially favourable price while Indian producers have to pay such prices as are in force for spot purchases. It is a matter of great importance, in our view, that the many varieties of steel which are consumed not only by the automobile industry, but also by other industries, such as, alloy and tool steels and sheets for body panels are produced in India as soon as possible. In the mean time, we would recommend that for steel items the industry should be enabled to place orders for its requirements more than twelve months ahead to ensure timely supplies at the best possible prices.

5.1. We have in the preceding paragraphs drawn attention to some of the difficulties and handicaps of the Indian industry which have been partly responsible for making Indian costs high. We now turn to the more specific question of the extent to which the industry itself is to blame for the present situation and the manner in which it can be rectified.

5.2. We have explained earlier the difficulties in attempting any comparison of the actual cost of producing individual automobile components in India with overseas costs for lack of adequate data. While we can draw no precise conclusions regarding relative costs from the available figures, our study gives us reason to believe that in general the cost of production of components of passenger cars in Indian factories is at least twice as high as the price at which they can be purchased abroad. In the case of commercial vehicles the ratio is less unfavourable and Indian costs appear to be something like 40 per cent. above the overseas prices.

6.1. We are convinced that the disparity between Indian costs and overseas purchase price is capable of considerable reduction. We discuss below some of the weaknesses of the automobile industry which are responsible for higher costs and which in our view are capable of being cured by proper supervision and control.

6.2. The units engaged in the development of automobile in India fall under two broad categories; some started operation mainly as assembly units and were later on converted into manufacturing units. Others of recent origin were planned as manufacturing units from the very start. The latter had the advantage in that at the time they were conceived, future demand was known with greater accuracy. As a natural corollary, the investment output ratio, the cost of production and the level upto which the prevailing production methods are economical vary from unit to unit. No comparison as regards efficiency will be fair unless the origin of units and other relevant factors are borne in mind. However, we are of the view that some of the earlier units could have improved their efficiency and economy of operation had they paid greater attention to the earlier recommendations of the Tariff Commission. The importance of a suitable training scheme had been stressed time and again by the Tariff Commission in both their reports of 1953 and 1956 respectively. It was, therefore, extremely disappointing to find that the manufacturers who have been longest in the field have thought it unnecessary to accept this advice. The only

unit which has, in our view, a really satisfactory and adequate training programme for its workers is TELCOS. Their experience shows that the output of the Indian worker is not much below that of the German worker and taking into account the differences in wages we feel that with proper attention to training the Indian industry can well off-set some of its disadvantages by a reduction in wage costs.

6.3. We also feel that enough attention is not being paid to technical supervision. The following table shows the break-up of the number of employees of the various manufacturing units:—

S. No.	Name of the unit	Skilled	Semi-skilled	Un-skilled	Total	Clerical & Super-visory	Others	
1.	Hindustan Motors .	603	1385	1971	3959	549	569	5077
2.	Standard Motors .	80	246	44	370	130	123	623
3.	Ashok Leylands .	103	530	261	894	223	314	1431
4.	TELCO .	2315	424	360	3099	802	21	3922
5.	Mahindra and Mahindra.	539	434	460	1433	308	145	1886
6.	Premiers . . .	1983	970	1376	4329	743	737	5809
7.	Simpson & Co. .	548	390	601	1620	443	47	2080
8.	A. P. I. Ltd. (for Diesel Engine only)	8	24	9	41	15	..	56

It is difficult to comment on the overall staff position as this depends upon the rate of output, degree of indigenous manufacture and the production methods followed by the different units. The employment of large number of unskilled workers in some of the units seems to have been due either to the lack of proper internal transport arrangements and/or the absence of a flow-line of production necessitating in cross-movement of materials.

6.4. Similarly, there is, in our opinion, a good deal of somewhat wasteful expenditure on sales and distribution. The following table sets out the incidence of this item per unit for the various vehicles:—

Models	Rs.
Ambassador	141
Fiat	99
Standard 10	79
Standard Vanguard MK. III .	123
Jeep	413
Bedford Diesel	161
Dodge Diesel	243

Models	Rs.
Dodge Petrol	227
Tata Truck	272
Tata Bus	289
Comet	453

In our opinion these figures are generally high and in the case of a vehicle like the jeep where a good proportion of the sales is to Government Departments the figure appears to be most unjustifiable.

6.5. While we have been critical of the heavy expenditure on semi-skilled and unskilled workers, as well as on non-technical staff connected with sales and distribution, we feel that the industry could and should take steps to improve technical supervision even if this means added expenditure. All units rely on firms abroad for technical collaboration. The extent to which they are being helped under their agreements varies. In some instances the flow of technical advice is hardly significant while in others the co-operation seems to be full-fledged. Either by getting adequate co-operation from abroad or by engaging suitable technical personnel on their own most manufacturers could achieve better results.

6.6. No manufacturer except TELCOS has even attempted to compare its standard time with that of its collaborators in spite of the wide divergence in the cost of production between the indigenous manufacturer and his foreign associates. Such comparison would have revealed the steps to be taken to improve the technique of production so as to secure better productivity and utilization.

7.1. The defects to which we have drawn attention seem to reflect a general lack of care towards the importance of keeping down costs. Although the cost structure of the industry has been examined by Cost Accountants at the time of the Tariff Commission enquiries in the past and we had to have a similar cost examination made for our purposes, we were distressed to find that the industry as a whole has no adequate system of cost accounting except for Simpsons who make the Perkins Engines. The cost data available to us therefore were open to serious criticism and objection. The Chief Cost Accounts Officer to the Government of India, who examined the cost of production of the vehicles/engines for us, has at our request given a brief commentary on the system of cost accounting—or rather the lack of it—in the automobile industry. His memorandum on the subject will be found in Annexure V.

7.2. Here again, although the Tariff Commission in its 1956 Report had recommended that the manufacturers should maintain cost data in sufficient detail to enable the cost of production of components, individual assemblies and final assemblies to be easily ascertained, the manufacturers by and large have ignored this recommendation and not taken any steps to implement it. We recommend that Government should instruct the industry to introduce an adequate system of cost accounting within six months after which the factories should be

visited again by the Chief Cost Accountant to see that the instructions have been compiled with.

8.1. This lack of cost consciousness on the part of the industry is partly due to historical reasons. The demand to start with was so small that the effort and expenditure necessary to reduce costs did not probably appear worthwhile, as lower costs were not likely to result in increased sales and better returns.

8.2. The fact that many units of the industry had inadequate capital resources at their disposal was also responsible for this state of affairs. Some of the firms concerned, even if they had the foresight to realize the importance of better techniques of production, did not have the funds necessary to invest not only in plant and machinery but also in the training of workers to get the most economic production. In the recent past with a generally better outlook for the automobile industry due to increase in demand, there has been an improvement in the position and some of the firms have been able to raise additional capital to enable them to press forward with their manufacturing programmes. We would, however, emphasize that one of the main reasons for the slow progress of the industry in India is that some of the units seem to have embarked upon a major manufacturing programme without making sure of the kind of capital resources required for an industry of this kind.

8.3. The system of price fixation which was based on an addition being made to the actual cost of production has also contributed to the neglect of economy. We discuss this aspect of the problem in detail in our chapter on price policy.

8.4. The absence of adequate internal competition has been another factor which has led to the neglect of economy and efficiency in production. In the rest of the report, we have laid considerable emphasis on the importance of ensuring competition between the different producers.

9.1. Regarding the actual quality of production, we are happy to record that there were not many complaints about the performance of most of the vehicles being produced in India. What distressed us, however, was that many complaints were voiced during the public hearings relating to defects which could have been easily detected before the vehicle left the factory had there been an adequate system of inspection and check.

9.2. When an industry is being developed under conditions which make it difficult to avoid an increase in prices, the consumer has necessarily to put up with high prices. If in top of that, there is even in stray cases evidence of defects due to carelessness or mistakes, the grievance of the consumer would be entirely legitimate. The industry should always take care to avoid such defects and to remedy them without argument, whenever they are brought to notice. Though we have reason to believe that there has been since 1956 considerable improvement in the quality of automobiles manufactured in India, sufficient care is not always being taken at the assembly stage to

avoid minor but irritating defects from creeping in. Here again competition would be a healthy tonic for the industry.

9.3. We understand that the investment in setting up the instruments and equipments specially designed for the final test of the vehicle is low. Quite apart from detecting errors before they get to dealers or consumers, the very knowledge that a firm has proper test equipment would have a re-assuring effect on the consumer.

9.4. In India, there is no recognized institution for the testing of vehicles except for such facilities as the Defence Ministry have got for their special purposes. It would be desirable to set up such an institution as soon as possible.

10.1. Before we leave the question of costs within the factory we would also like to refer briefly to the profit element. A statement of the dividends declared by the different automobile firms during the last five years is set out below. These figures are not on any judgment unduly high.

UNIT	Percentage of Dividends on ordinary shares				
	1954-55	1955-56	1956-57	1957-58	1958-59
1. Hindustan . . .	Nil	Nil	Nil	Nil	5
2. Premier	..	6	6	4	9
				Subject to tax	
3. Standard Motors . . (Calendar year 1954 to 1958)	6	6	6	7½	7½
4. Mahindra and Mahindra .	10	12½	17½	22	22*
5. Telco	Nil	6	8	9	9*
6. Ashok Leyland (Calendar year 1954 to 1958)	5	Nil	6	6	6
7. Simpsons	6	13	6	9·75	..
8. Automobile Products of India	Nil	Nil	Nil	Nil	..

*These firms have activities other than manufacture of automobiles and the dividends indicated above also take into account these activities.

10.2. We discuss the question of profits and costs more fully in our Chapter on Future Price Policy.

CHAPTER V

ANCILLARY INDUSTRY

Motor car manufacturers all over the world rely on other manufacturers to supply them with a large number of items which are used either as raw materials or as finished components in the complete vehicle. Some of these products are those which are used by many different industries while others are made specially for the automobile industry. In the former category, there are items like paints, upholstry materials, ball bearings, screws, etc. In the latter category, there are items like tyres and tubes, batteries, carburettors, fuel injection equipment and spark plugs. Industries engaged in the production of the latter class of items which are intended primarily or exclusively for the automobile industry are generally known as ancillary industries.

2. The extent to which an automobile manufacturer relies on ancillary industries for drawing its supplies of components depends on a number of factors. In the early stages of development of the automobile industry in each country, the manufacturer himself had to produce most of the components which he wanted for his vehicle. As time went on and a number of manufacturers required the same components or similar components and a demand from the replacement market also developed, new units came into being to produce particular items of equipment. These units were not only able to produce more economically because of the larger market which they catered for, but were able also to spend a great deal on research and development for making the components in question more efficiently. The main automobile manufacturers were only too happy to take advantage of the facilities for buying out specialised components and to concentrate their own investment and research on the essential items which distinguish their vehicle from that of their competitors—the engine, the chassis, the transmission and other similar items. It is estimated that in Europe components bought from outside represent 50 to 60 per cent. of the manufacturing cost of motor cars, while for commercial vehicles, the production costs represented by bought-out components vary widely and may be anything between 25 per cent. to 90 per cent. In general the element of bought-out items is between 50 per cent. to 60 per cent. of the cost of manufacture.

3.1. When the automobile industry began to develop in this country, the main automobile producers were engaged in assembly work. When they started developing actual manufacture of components, many of them not unnaturally turned to the somewhat simpler items not forming an integral part of the vehicle and which are of a nature which in other countries are taken up by ancillary producers, such as radiators and bumpers. After the first Tariff

Commission Enquiry as greater emphasis came to be placed on the development of the basic items by the automobile manufacturers, this trend was arrested. A number of independent units came into existence manufacturing various components required by the automobile industry.

3.2. The part which is now being played by the ancillary industry is by no means insignificant. For a proper evaluation of the percentage of manufacture being undertaken respectively by the main manufacturers and the ancillary industry today, we have attempted a comparison based not on Indian prices, but on the c.i.f. prices of those components as measured by the 'deletion allowance' given by the overseas supplier in the price of the complete vehicle for replacing the imported component by the indigenous product. The following table sets out the results:—

Type of vehicle	Total deletion from complete CKD less overseas ex-factory price of imported finished and imported semi-finished items	Deletion allowance for items which are bought-out indigenously	Deletion allowance for items of self-manufacture (Col. 2 & 3)	Ratio of Col. 3 to Col. 2 as a %	Ratio of Col. 3 to the net deletion allowance from built-in vehicle as a %
(1)	(2)	(3)	(4)	(5)	(6)
	Rs.	Rs.	Rs.	%	%
1. Ambassador . . .	3,226	N.A.	..	..	..
2. Bedford Petrol . .	1,902	1,902	Nil	100·0	70·2
3. Bedford Diesel . .	4,435	4,435	,,	100·0	85·2*
4. Fiat	1,451	692	759	47·7	33·8
5. Dodge Diesel .	6,151	5,141	1,010	83·6	78·6*
6. Standard Ten . . .	845	506	339	59·9	36·6
7. Tata Mercedes Truck .	6,110	2,243	3,867	36·7	33·9
8. Jeep	2,834	1,651	1,183	58·3	51·1
9. Perkins P6V Bare Exhauster Diesel Engine .	2,148	867	1,281	40·4	37·6
10. Standard Vanguard Mark III	1,297	776	521	59·8	43·3
11. Meadows Engine		..	335	..	..

*The high percentage is due to the act that the engine is bought out.

3.3. The items being supplied by the ancillary industry can be classified in three broad categories as set out below:—

(a) **Items whose import is not necessary.**—Paint, lacquer, varnishes, brake fluid. All upholstery materials and trimming parts. Tyre, tube, flaps, fan belts, hoses, bulb, horn, weather strip, door buffers and all other rubber components except fuel and brake hoses and brake parts. Shackles, shackle pins, U bolts, centre bolts, muffler and tail pipes. Battery, battery cable, rear light, parking and stop light, auto bulb, spark plugs of 14 and 18 mm. Rear view and mudguard mirrors, number plates, sun shade, sun visor, luggage, carrier, mascots and motifs, ash trays. Cab bodies and truck bodies of all categories. Tyre inflator and jacks.

(b) **Components whose production has started but complete self-sufficiency has not yet been achieved.**—Leaf spring, hub caps, shock absorbers, brake lining and clutch facing, gaskets, cylinder liner, piston pin, piston rings, electric horn, wire harness, dynamo for cars, roof lamp, bulb sockets. Fuel injection equipment, inlet and exhaust valves, shell type bearings, radiator assembly, nuts and bolts, ball bearings upto 2″ size, fuel and air filters, laminated glass. Fuel tanks, clutch and brake assemblies. Car bodies, hinges, door handle, window regulator.

(c) **Components for whose production schemes have been approved or are under consideration and whose production is likely to be established by 1961.**—Starter motors, dynamos, voltage regulator, distributor, ignition coil, switches, head and side lamps, traffic indicator, contact brake points, windscreen wipers, timing chain, bowden cables, oil seal, oil pumps, fuel pump (petrol), fuel hoses, carburettor, brake hose, brake shoe, back plates and vacuum servo brakes. Valve guide, valve seat, valve spring. Steering assembly, tie rod ends. Propeller shafts and universal joints. Ball, taper, cylinder and self-lubricating bearings. Wheels and rims. Instrument panel, dash board instruments, flexible shafts.

3.4. The components referred to above are all which are being manufactured or are going to be manufactured by ancillary industries and are exclusive of those made by the vehicle manufacturers themselves. Further details are given in Appendix III. It will be seen that the progress made is substantial.

4.1. Satisfactory as the above picture may seem at first sight, there are a number of points which require attention. In the public hearings which we had, the ancillary manufacturers' spokesmen argued that the automobile manufacturers were not sympathetic to the ancillary industry and were trying to produce many items which had better be left to the latter. The automobile manufacturers denied any such prejudice. At the same time they argued that the ancillary industry was often supplying components which were not of acceptable quality and, therefore, the whole reputation and performance of their vehicle was being endangered by the relatively

poor performance of certain components obtained from the ancillary industry. They also pointed out that the price at which they obtained components from the ancillary industry was often higher than the price of the imported product and this meant that they had to go to Government for an increase in prices whenever an item was omitted from the import list and the industry was told to buy its requirements from the ancillary industry.

4.2. In its first report on the automobile industry, the Tariff Commission had observed that it would be difficult to arrive at a general conclusion in regard to all ancillary industries which differ considerably in the technique and equipment and the state of development reached by them, and that it would be necessary to examine each industry separately with a view to assess its technical soundness and to determine the fair ex-works price of its products. The second enquiry into the automobile industry by the Tariff Commission which made a detailed investigation of costs was restricted to the main industry only and did not cover ancillary industries. However, the costs of some ancillary industries have been referred to and examined by the Tariff Commission independently. These include fuel injection equipment, spark plugs, tyres and tubes and batteries.

4.3. Although it has not been possible for us to have any cost examination made of the ancillary industries we have been able to make a study of the prices at which components are being supplied by the ancillary industry to the main producers. The result of this study is somewhat disquieting. In many instances, the increase in domestic price over the price of the imported components is very much higher in respect of items supplied by the ancillary industry than for components produced by the main automobile producers. In our view, such a position should not be accepted without a great deal of scrutiny and caution. *Prima facie*, the ancillary industry in India should be more economic and the protection given to it by tariffs plus freight and insurance charge should be ample. But very often the price of the components purchased from the ancillary industry costs a great deal more than the landed cost of the imported product.

4.4. In the course of our study, we noticed another curious phenomenon. Some producers are able to buy their components from the ancillary industry at prices which are competitive with and even cheaper than the prices of the imported components, while others have a different tale to tell. We would illustrate this point by making a comparison of the relative prices of components bought from the ancillary industry in respect of various vehicles. The following gives the relevant figures:—

Vehicle	Deletion allowance for items bought out indigenously	Landed cost of items bought out indigenously	Price at which the item is purchased indigenously
(1)	(2)	(3)	(4)
	Rs.	Rs.	Rs.
1. Ambassador	906†	1,270*	1,266

(1)	(2)	(3)	(4)
2. Bedford petrol	1,902	2,670*	2,705
3. Bedford Diesel	4,435	6,200*	9,795
4. Fiat	692	1,377*	1,155
5. Dodge Diesel	5,141	7,629*	9,434
6. Standard Ten	506	875	1,106
7. Tata Mercedes truck	2,243	3,601	3,377
8. Jeep	1,885	2,928	2,500
9. Perkins P. 6 Bare Exhauster diesel engine	867	1,165	1,136
10. Dodge petrol	1,582	2,347*	2,803
11. Standard Vanguard Mark III	776	1,426	1,803

*These are estimated figures and not actuals.

†Partial to the extent known.

4.5. It would be seen that Mahindra and Mahindra, who are the producers of Jeep, are able to buy components from the ancillary industry at a cheaper price than the landed cost of similar components, if imported. It is possible that to some extent this favourable result might be due to the fact that after the devaluation of the rupee, the import price of goods of U.S. origin went up. On the other hand U.S. production of automobile components is known to be highly economic. It will also be evident from the table in para 3.2 above that Mahindra and Mahindra rely to a much larger extent on ancillary producers than any other manufacturer. The inherent economy of relying on the ancillary industry is, therefore, not in doubt. The less satisfactory figures of the other producers only underline the importance of supervision and control. To achieve economic results from the ancillary industry, there should be much greater consciousness regarding costs than there is in todays conditions, when competition from imports is non-existent, when vehicles can sell at any price and when prices are fixed on a cost-plus basis. We, therefore, consider it essential that a stricter discipline should be imposed both on the ancillary producer and on the main producer. If the price of bought-out components can be reduced the cost of vehicles can be lowered.

4.6. Another disquieting feature though not too wide-spread is that in many instances ancillary units are in fact, if not in name, the subsidiaries of main producers of automobiles or engines. When any kind of a special relationship exists between the ancillary industry and the main producer the need for scrutiny over the prices charged is very much greater. In general, we recommend that ancillary production should be entrusted to wholly independent units and not to firms which are connected with the main producers.

5. Having regard to what has been stated above and with the prime objective of ensuring that prices of automobiles and automobile components come down, we make the following recommendations:—

(a) On the whole we think it is undesirable, even from the point of view of the ancillary industry itself, to give it an assured market regardless of cost or quality. We understand that when any component is developed by the ancillary industry its import by the main producers is

automatically cut out and the price is left to be settled between the two units concerned. This in our view is not a healthy position.

(b) When the ancillary industry produces an item which can be sold both in the replacement market as well as to vehicle manufacturers the cut in imports should in the first instance be in the spare parts quota and not in the manufacturers' import of components to be supplied as original equipment. In other words, in such cases the vehicle manufacturer should be tempted to buy such components on economic considerations rather than compelled to do so.

(c) In the case of components which are purchased primarily as original equipment and for which there is no appreciable demand as spare parts for replacement purposes, pressure should be exercised on the vehicle manufacturer to use such products and on the ancillary industry to keep its prices down. In general we feel that the ancillary industry should be able to supply components at a price which does not exceed the c.i.f. price of similar components when imported by more than 40 per cent. It is our belief that in most cases a lower margin would be adequate. We suggest, therefore, that where the purchase of a component from the ancillary industry is going to result in an increase over the price at which the firm is able to get the imported component after paying duty, Government should consider whether *prima facie* the price charged is reasonable. If the price charged is more than 40 per cent above the c.i.f. price, it should not be accepted without detailed scrutiny and if necessary a proper cost examination.

(d) To give the maximum inducement to automobile manufacturers to use components produced by the ancillary industry the saving in foreign exchange resulting from the purchase of components from the ancillary industry should not be a cut in their exchange allocation but should be allowed for use for meeting other requirements of imported items including spare parts and equipment.

(e) The ancillary industries will be well advised to reduce their prices for original equipment as is the practice in other countries because thereby they would be in a much stronger position in the spare parts market where higher prices are normally charged.

(f) In so far as the automobile manufacturer complains that the quality of the indigenous product is not upto the mark, it would be necessary to provide for suitable checks regarding quality before the automobile manufacturer is compelled to use the component if it is of any functional importance in the performance of the vehicle. We understand that such quality tests are often carried out by the overseas firms with whose collaboration the Indian vehicles are being developed. We consider it desirable to develop facilities for such tests in the country also.

(g) From a long-term point of view in sanctioning schemes for development in the ancillary industry care should be taken to see that the production is economic and upto the necessary standard. While for items which have a spare parts market it would be desirable to encourage additional capacity somewhat freely, so as to provide adequate competition from the consumers point of view, in respect of equipment which is sold mainly as original equipment, the capacity to be developed should have regard to the volume of demand. In many instances, it would be necessary to develop such capacity in single unit only. Before such schemes are sanctioned, the ability of the firm to invest sufficiently in the plant to make a satisfactory product, its arrangements for technical collaboration and other relevant factors should be carefully examined.

(h) In many instances different automobile firms are using components of different designs. Standardisation will make it possible to have more economic production and the Development Council for the industry should, in consultation with the Indian Standards Institution, devise suitable standards to facilitate the growth of the ancillary industry on an economic basis.

(i) A point which has been raised on a number of occasions is whether certain lines of production should be earmarked for the ancillary industry. We feel that it would not be advisable to draw a hard and fast line based on the experience of other countries in altogether different circumstances. Thus, we discuss below the possibility of organising the manufacture of certain components normally produced by the main producer in separate ancillary units. Likewise, it may be advisable in Indian conditions to permit the main producers to take up the production of items, which in other countries are produced by the ancillary industry provided the main producer guarantees that regardless of his actual cost, he will not demand an increase in the price of his vehicle for this production and secondly, he would take a cut if similar components of similar quality are offered by the ancillary industry at lower prices.

(j) To ensure that the sanctioned programmes of manufacture move with speed and do not merely block capacity, the existing firms which have been already licensed for producing components should be asked to apply for import licences for plant and machinery within a period of 3 months. Those who fail to do so should be deemed to be casualties and other arrangements should be made to fill the gap.

(k) In respect of items not already covered by sanction to manufacture, a similar time-limit of three months should be given for putting in new proposals. This consideration is of special significance in the case of items for which more than one unit cannot be economically sustained.

Government should make it clear that any firm which fails to submit a manufacturing programme satisfactory to Government within the time-limit will be debarred from further consideration for a manufacturing licence for the next three years, if the capacity taken up during the three month period is considered adequate for the country's needs, both for original equipment and for spare parts. We make this recommendation because we have noticed that reputed overseas manufacturers of proprietory items are not coming forward as readily as they might, but once somebody else gets a manufacturing licence, they appear ready to put in their proposals. We would certainly wish the automobile industry in India to have the components produced by or in collaboration with the best manufacturers in the world, but if they are not readily forthcoming, we should be content with the second best and those who do not come forward now should not have the opportunity to come in only when their markets are threatened.

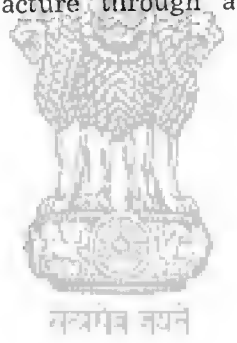
6.1. We have pointed out above the main advantages of the ancillary industry which have led to their development in many overseas countries. We feel that in Indian conditions, ancillary industries have a specially important part to play because the volume of demand on each individual automobile manufacturer is very small. In Indian conditions, therefore, it would be appropriate and desirable if even some of the major items, not generally considered to be the responsibility of the ancillary industry, were developed not by each automobile manufacturer individually but in units which would cater to the needs of a number or all of them. Such an approach would not only result in more economic production but would also lead to economy in the foreign exchange spent on the import of plant and machinery. The expenditure on the installation of presses, gear cutting machines, foundry equipment and many other similar items could be substantially reduced by developing common facilities to be shared by more than one producer.

6.2. The real difficulties in the way are two: Firstly, the Indian automobile industry does not seem to be willing to develop co-operative ventures of this kind, each unit being anxious to do what it can on its own rather than join hands with others in the field. Secondly, finding the necessary capital is also a problem, because while some of the simpler items can be produced even by small-scale industries, the kind of ancillary industry which can produce components more economically than the main producers does need to invest fairly substantially. Unless the production is under conditions which ensure quality and economy the ancillary industry may tend to handicap rather than help the development of the indigenous automobile.

6.3. Having regard to the consideration mentioned above, we feel that if a company could be formed which has the blessings and support of all the automobile manufacturers and which is fairly well placed in regard to capital resources a great deal of substantial

progress would become possible. Such a company could negotiate with various manufacturers of proprietory items like dash-board instruments, with the confidence that on concluding a satisfactory agreement the entire automobile industry in India will patronise its products. Such a company could also help in standardisation.

6.4. How is such an organisation to be brought into being? We have in our discussions put forth the idea to the automobile manufacturers with the suggestion that they might all participate in such a venture financially. The response we have had is not an encouraging one. The main reason, as far as we can judge, is that there is no possibility of an agreement regarding management. In other words, the automobile manufacturers themselves are not prepared to put their money into a project the management of which is not in their own hands. This makes the idea of a joint venture impossible. It would, in our view, be advisable, therefore, for Government to take the initiative in the matter. Government could provide the bulk of the capital and invite the motor manufacturers as well as the public to participate in the capital of the company with it. Such a company would become a positive instrument of development and it would no longer be necessary to rely on individual initiative which is not always forthcoming. It would also be possible to pay adequate attention to cost and quality without which indigenous manufacture through ancillary industries loses much of attractiveness.



CHAPTER VI

FOREIGN EXCHANGE FOR THE INDUSTRY

1. Our terms of reference require us to consider the foreign exchange aspects of the automobile industry. We feel that it would be more appropriate to go outside the automobile industry proper and to consider the problem from the point of view of the road transport industry and the car-owning community.

2.1. In Appendix IV we have tabulated from the information made available to us by the Development Wing of the Commerce and Industry Ministry the following data:—

(a) Foreign exchange per vehicle and for the production programme envisaged in April—September 1959.

(b) Foreign exchange given to ancillary industries to balance the same production programme.

(c) Foreign exchange given to automobile manufacturers for bringing in spares for the maintenance and servicing of their vehicles.

(d) Value of import licences issued by CCI&E for spare parts imports through the trade.

(e) Value of foreign exchange given to State Transport Undertakings for the maintenance of their fleet.

(f) Value of foreign exchange given to provide fleet-owners for the maintenance of their vehicles.

2.2. The total allocation of foreign exchange on the above counts adds up to 18·1 crores. The raw materials given to the tyre industry including imports of rubber add up to a figure of 9·28 crores per year on the basis of the capacity which is already established. In addition, there is an import bill of 22·3 crores for crude oil for the refineries as well as imported diesel.

3. The total picture of the foreign exchange requirements for moving goods and persons by road is thus a pretty formidable one. At the same time we would like to emphasise one point. Commercial transport vehicles are really capital goods of the road transport industry. Just because they are mobile and do not look like a factory we should not forget that in terms of the foreign exchange spent, there are not many industries which could beat the road transport industry with reference to the employment it provides and economic benefits which it bestows. Thus, a large commercial vehicle can provide direct employment on a continuous basis to 6 or 7 persons. It also provides indirect employment to people engaged in the loading and unloading of vehicles and in the many services necessary to keep them going. This employment is not concentrated in urban areas but is increasingly spreading throughout the country.

To the people whose goods are moved by road from otherwise inaccessible areas there is a better return for their production. The daily needs of urban life are moved economically from the rural areas giving a better returns to the farmer and a more economic price to the consumer. Similar results accrue from the movement of industrial raw materials and finished products. Taking the price of a commercial vehicle as something like Rs. 30,000, of which only a part is a foreign exchange liability, it is doubtful whether continuous widespread employment with benefit both to consumer and to the producer is provided by many other industries with a similar expenditure of foreign exchange. We make this point only to emphasise that the heavy expenditure of foreign exchange on the road transport industry is in no sense a waste, and it is only after this basic point has been recognised that the question of economising in the foreign exchange expenditure can be considered in its true perspective.

4.1. Throughout the public hearings, when many conflicting views were expressed, there was complete unanimity on one point among manufacturers, dealers and consumers. They all argued that the scarcity of spare parts and inadequacy of service facilities are the problems requiring urgent attention by increased allocations of foreign exchange. We are in full agreement with this view. There is little purpose to be served by putting more vehicles on the road with a not insubstantial expenditure of foreign exchange on each, when existing vehicles which could be brought into service by a relatively small expenditure remain idle. If these vehicles are brought back into operation, there would be an improvement in the supply position. Further the lowering of prices for spare parts and of servicing resulting from a more liberal allocation of foreign exchange would reduce the burden about which the vehicle-owner is rightly complaining. In the long run, it is not the initial price of the vehicle but its maintenance cost which assumes greater importance. We would, therefore, recommend high priority for all that is required to keep existing vehicles in good shape and to renovate and repair those which are defective. In other words, increased availability of spares should be ensured even if—though we hope such a contingency can be avoided—it is at some sacrifice of increased production of vehicles. Along with spares, the tools for servicing—so-called garage tools and other equipment—need to be provided. The vehicle-owning community is now much more widespread than it was 10 years ago. New servicing stations are therefore needed and many of the existing ones are very badly equipped. It may not of course be possible to allocate enough foreign exchange in any one half year to meet the country's needs in full. But a steady programme for the installation of new equipment is in our view necessary.

4.2. While we have laid stress on the import of spare parts to relieve the present acute shortage we attach the greatest importance to setting up capacity in the country for the production of these parts. We have in our chapter on ancillary industries referred to the fact that so far ancillary industries seem to be concentrating mainly on the supply of equipment to the automobile manufacturers

for the original assembly of the vehicle. We consider that the ancillary industry has a much bigger role to play in the spare parts market. In developing the ancillary industry it would be desirable to provide for much larger capacities for the more common types of spare parts than the automobile producers themselves would take up, so that there is plenty available in the spare parts market. We would consider it quite legitimate to give encouragement to the ancillary industry (subject to quality being satisfactory) by cutting down imports of those spare parts which are being produced in the country. To conserve foreign exchange it may be also worthwhile eliminating from the import list such items which though technically classifiable as automobile spares and components are more ornamental than functional in their nature.

4.3. An allied problem is that of ensuring that the spare parts which are imported do get to the consumer at a reasonable price. We were repeatedly told that by and large it is almost impossible to get spare parts at the official prices. We feel that with some increases in the foreign exchange allocation the position would ease. In addition possibility should exist for even owners to get import licences. At present State Transport Undertakings and fleet-owners are given import licences for spare parts needed by them. It would be difficult to consider requests from small fleet-owners or individuals. However, if small fleet-owners were to organise themselves on a co-operative basis their case for getting their own import licences might be considered sympathetically. While individual owners of cars must generally depend on the trade, individuals who happen to be owning cars which are not in use in large numbers in the country have a special problem as they find it impossible to get their requirements of spare parts from the ordinary trade. The Automobile Associations, to whom we put the problem, indicated that they would be quite prepared to bulk the requirements of spare parts required by their members and make out one joint import application on their behalf We feel that this arrangement might have many advantages to offer and should be considered by Government.

5.1. We now turn to the requirements of the automobile industry itself. In this group we have to consider the requirements of capital goods for increasing the indigenous content of the vehicles as well as the import of components required for current production.

5.2. We understand that after the serious difficulties in regard to foreign exchange which developed in 1957, Government gave high priority to the components required for the production of commercial vehicles, a lower priority was given to the components for the production of passenger cars and in regard to capital goods Government imposed certain stringent conditions regarding overseas finance being available before giving import licence.

5.3. The priority given by Government for the components of commercial vehicles was in our view wholly legitimate. It is true that the consequent shortage of passenger cars has created a great deal of comment and criticism from people who find it difficult to obtain a car except after a long period of waiting. Government

have since raised the allotment of foreign exchange for the production of passenger cars and we would wish that position to continue. However, as between passenger cars and commercial vehicles there can be no doubt that the latter must have a higher priority. Some of the foreign exchange provided for commercial vehicles goes to the making of buses. There is a general shortage of buses also, and considering how much higher the passenger carrying capacity of a bus is and taking into account the fact that it is catering to lower income group, we would regard the production of buses to be far more important than the production of cars.

5.4. While we agree with the policy of priority as between commercial vehicles and passenger cars, we feel that the priority between capital goods and components needs reconsideration. The effect of the restraint used on the import of capital goods has been to slow down the rate at which the import of components per vehicle is cut down and, therefore, in the long run more foreign exchange is spent. We consider, therefore, that the import of capital goods for the automobile industry should receive a higher priority than the import of components even if, in the short term, it has the effect of creating some shortages.

5.5. In order that the expenditure of foreign exchange is rationalised and reduced to the minimum, automobile manufacturers as well as the ancillary industry should be asked to apply to Government for all the capital goods they wish to import to complete their manufacturing programme by the end of 1961. By getting such applications in sufficient detail, it would be possible for Government to see that avoidable duplication of capacity between one manufacturer and another and the main industry and the ancillary industry does not take place. In other words, the danger inherent in piecemeal consideration of these cases, namely, that more than one firm might install the same kind of expensive equipment which will not be fully occupied should be guarded against. We have dealt with this point elsewhere in the Report.

6.1. There is another issue which is of considerable significance from the foreign exchange angle. We refer to the growing imbalance between diesel and petrol. The picture of a growing deficit of diesel which has to be imported, and a rising surplus of petrol, available from indigenous sources, is clearly a disturbing one from the foreign exchange point of view. We understand that Government would like our views as to the steps which should be taken to rectify this imbalance.

6.2. The efforts made in this direction so far by Government have taken the shape of raising the taxes on diesel to a higher level and thus narrowing the price gap between diesel and petrol. We feel that in this approach to the problem an important point is being overlooked. The increase in the consumption of diesel is not merely on account of its relative cheapness but also and even more on account of the higher efficiency of the diesel engine. For certain types of uses and for certain purposes petrol could not be used no matter what the price relationship between the two fuels is. On account of the special advantages of diesel, we understand that even the Railways are going in for a dieselisation programme. Likewise

diesel is used as a fuel for many other purposes not connected with road transport—by farmers, for power generation and so on—where it cannot be replaced by petrol. For road transport, while there is an element of choice and competition between diesel and petrol, the area of competition is a narrow one. Motor cycles, passenger cars and commercial vehicles of 1-ton capacity are and would be almost exclusively petrol operated. Commercial vehicles above 5-ton are and would be almost exclusively diesel operated. The area of competition between petrol and diesel, therefore, is in the medium range of commercial vehicles. The policy of raising duties on diesel, while it may have some effect on this narrow range of vehicles, would also have the effect of raising costs of operation in an area where petrol would not be a feasible alternative.

6.3. Insofar as taxation is a weapon for increasing the consumption of petrol and decreasing the consumption of diesel, we do not feel that raising taxes on diesel would provide an answer. Indeed there is a danger that kerosene would replace diesel and in that case the effect on foreign exchange would be the same because kerosene is equally an imported product and there would be a loss rather than an increase in revenue. Therefore, if taxation is to be used as an instrument we would favour the imposition of an excise on diesel engines for road transport provided they are within a certain range in regard to horsepower. With this should be coupled a reduction in the level of taxation on petrol. Side by side there should be a greater availability than there is today of different types of transport vehicles fitted with petrol engines for carrying goods. We shall deal with this point later.

6.4. As we have said, however, for the heavier road transport vehicles, diesel is a better and more efficient fuel than petrol. The only way in which the consumption of diesel in such vehicles can be reduced and the consumption of petrol can be increased is by marketing not pure diesel oil, but a mixture of diesel and petrol. We understand that most of the diesel engines now being produced can, either as they are or with some minor adjustments, take a mixture of diesel and petrol and this would make a sufficiently large saving in the consumption of diesel and increase in the consumption of petrol to restore for the present the necessary balance between the two fuels. It would also not be difficult for the various manufacturers to make suitable adjustments in their engines to raise the ratio of petrol to diesel in the mixed fuel. Necessary steps to market the mixed fuel need to be taken at an early date.

6.5. We understand that one of the difficulties in the way of marketing a mixed fuel is that the mixed fuel will need to be handled, transported and stored with the same precautions against risks of fire and explosion as petrol itself. It should be appreciated, however, that any effort to increase petrol consumption against diesel must inevitably mean the increase in the facilities for handling a fuel which will need the same safety precaution as petrol. What needs to be avoided in order to reduce extra cost is a position under which three types of fuel, namely, petrol, mixed fuel and diesel have all to be provided at the various pumps. In our view it should be possible and it would be desirable to introduce the mixed

fuel on the basis of arrangements which would contemplate that only two types of fuel are available in any area for normal supply through filling stations. To start with, the port towns could switch over to the mixed fuel in lieu of diesel. Thereafter while diesel might be available in small quantities at one or two places in these areas, all the filling stations should handle only petrol and mixed fuel. A suitable programme for the introduction of the mixed fuel should be taken in hand so that facilities for handling the mixed fuel could develop as a substitute for and not as an addition to the facilities for handling pure diesel.

6.6. The point which we would wish to emphasise in this context is that Government should take a clear-cut decision of policy on this subject at the earliest possible date. There has already been a great deal of investment in diesel engines in their production, in converting petrol vehicles into diesel engines and in the purchase of vehicles fitted with diesel engines. A sudden change in the economics of diesel operation will impose loss on the community and render some of the investment already made both in rupees and in foreign exchange infructuous.

7.1. Finally, we turn to the foreign exchange requirements of any new production of automobiles that might be set up. Clearly they must rank in priority below the categories we have discussed above, namely, maintenance of existing vehicles and maintenance and completion of existing production programmes.

7.2. Our consideration of future demand in relation to present capacity makes it clear, however, that the creation of additional capacity is inescapable. We feel that in order to reduce the expenditure of foreign exchange to the minimum and also with a view to ensure the quickest possible progress in the development of this industry, any new capacity sanctioned, either by way of expansion or by way of setting up of a new unit, should be not on the basis of progressive manufacture starting from the assembly stage and gradually increasing in indigenous content. Instead the firm concerned should produce all the components he undertakes to produce before he starts marketing his vehicles. We discuss this aspect of the problem elsewhere. For our present purpose, we would suggest that for new capacity, expenditure on foreign exchange should be limited to the capital goods required for the project and import of components as a recurring feature should be virtually eliminated.

CHAPTER VII

FUTURE DEMAND AND DEVELOPMENT

Having taken stock of the present position of the industry, we now turn to consider the lines of future development and the policy to be followed to sustain it. The first point to consider in this context is the pattern of demand with special reference to the Third Five Year Plan period.

2.1. In reply to our questionnaires, we have received various estimates of demand for vehicles of different categories for the Second and Third Five Year Plan periods. Of these the memorandum from the Indian Road and Transport Development Association Ltd., deserves special mention and is reproduced at Annexure II. The Development Council for Automobiles, Automobile Ancillary Industries and Transport Vehicle Industries have also furnished us with the estimate of demand as assessed by one of their sub-committees which has yet to be approved by the Council. The report of our own Sub-Committee, referred in Chapter I, para. 5.2. of this report is placed at Annexure III. The conclusions of these bodies are summarised in the following table:—

	1961			1966		
	Cars	Jeeps	Commercial vehicles	Cars	Jeeps	Commercial vehicles
1. Indian Road and Transport Development Assn. Ltd.	18,000	Included in cars.	20,000	40,000	Included in cars.	45,000
2. Development Council for Automobiles, Automobile Ancillary Industries and Transport Vehicle Industries.	20,000 to 24,000	6,000	30,000	40,000 to 45,000	9,000 to 10,000	60,000 to 75,000
3. Sub-Committee of *ad hoc* Committee.	20,000	Included in cars.	32,000	40,000	8,000	59,000
4. Western India Automobile Association.	28,000	Do.	31,500	35,000	8,000	40,000

2.2. All the above estimates are based on certain assumptions, relating to the rise in the national income, the level of industrial development which the country will be achieving in the Third Five

Year Plan and other similar matters on which we ourselves cannot take a final view.

2.3. There are in addition certain other factors linked with Government policies which make the problem of estimating future demand difficult. One of the most important of these is the taxation policy of Government both generally and in so far as it specially applies to vehicles and fuel. Then there is the question of dieselisation. To a not inconsiderable extent the increase in the demand for vehicles may depend on the policies which are pursued in regard to the dieselisation of road transport. If the use of diesel is heavily penalised by taxation or otherwise, there would be a decline in the demand for road transport.

2.4. Another uncertain factor is the policy of Government regarding the relative roles of railways and roadways in the transport system of the country. This is one of the matters which is at present under reference to a committee under the Chairmanship of Shri K. C. Neogy.

2.5. Another factor which will have an important influence on the number and types of vehicles in demand in the future in the extent to which the roads can carry heavier vehicles. There is in general a trend towards the use of heavier vehicles as the following table will show:

	1949	1950	1951	1952	1956	1957	1958
Van class (upto 1 ton payload).	2,446	1,656	1,975	1,268			
Light truck (1 to 2·2 tons payload)	2,090	1,083	1,974	1,313	813	814	789
Medium truck and bus class (2·2 to 4 tons payload)	9,212	4,691	4,315	4,382	11,998	15,218	12,900
Heavy truck and bus class (more than 4 tons payload)	1,688	1,283	1,532	540	886	1,041	1,257

If this trend is facilitated by the strengthening of bridges, the increase in demand may reflect more in the shape of a larger use of heavier vehicles than in a rise in the total number of vehicles sold. Other factors of a similar kind which may have a bearing on the total number of vehicles sold would be the extent to which trailers can be used, possibilities of increasing the loading capacity of the existing vehicles by suitable strengthening of the vehicles and the strictness with which the regulations against over-loading are enforced in practice.

3. While we hesitate for the reasons indicated above to commit ourselves to any forecast of the demand which might actually develop by 1965, the more specific question to which we as a Committee can usefully address ourselves and which has been put to us in our

terms of reference is to consider what capacity should be established in the country for the production of different types of vehicles.

4.1. We have earlier pointed out that because, to begin with, the demand for vehicles was too small it was necessary for Government not only to eliminate competition from imports, but also to limit the area of internal competition so that each manufacturing unit could build up capacity with a certain assured share of the market. There has been over the last five years a radical change in the position so far as medium trucks, by which we mean 3 to 5 ton diesel vehicles, are concerned. The demand for each of the three vehicles in this field, the Tata Benz truck, the Dodge KEW vehicle and the Bedford truck is in excess of the total production capacity of the three units concerned.

4.2. In these circumstances we recommend that the three units concerned, namely, Telco, Hindusthan Motors and Premiers should now be placed on a fully competitive basis. By this we mean two things: Firstly, these units should be permitted to produce and sell as many vehicles as they possibly can, and secondly, in planning their expansion they should accept the fact that the other units may also be expanding and offer competition to them. No part of the demand need be specifically earmarked for any of the units.

5.1. What we have said above about the development of the demand does not apply with equal force to the heavier vehicles of the Leyland family produced by Ashok-Leyland. This is not so much because the demand itself is lacking, but because heavier vehicles are not permitted to ply on a large number of roadways. The demand for Ashok Leyland's vehicles is too small to introduce competition in the heavier range. The kind of heavy transport vehicle which Ashok Leyland are developing will in the future play a very valuable part. It is desirable, therefore, that other units should not be allowed to take on heavier vehicles for production at this stage.

5.2. At the same time we feel that even for heavier vehicles, the stage has come when competition from the existing vehicles in the medium range should be allowed freer play. We refer to this point because in the past we understand some proposals had been made by the makers of medium vehicles to strengthen their vehicles so as to enable them to carry heavier weights. This type of diversification is in itself a desirable thing. It also enables the same expenditure of foreign exchange to meet bigger need. However in view of the peculiar position of Ashok Leyland, Government have in the past been reluctant to give this freedom to the makers of medium vehicles. We consider that the stage has come when the makers of medium vehicles should be allowed to market vehicles capable of carrying a heavier load so long as the basic features of the vehicle are not altered and so long as they do not ask for additional import licences.

6. There is one further point which we would make in regard to the general pattern of future development. In the past it has been necessary to approve schemes of progressive manufacture under which each firm began with an assembly of the vehicle out of imported components and gradually increased the indigenous content. Such a

pattern was unavoidable in the early stages of development of the industry. For future development we consider that the firms which propose to expand their output should be asked to undertake the investment necessary to increase the output without increasing the imported content of each vehicle. In other words, they must order such plant and machinery as they may need to complete their programme at the very beginning. Once Government are satisfied of this point, then the import of components for part assembly and part manufacture can be regulated according to the availability of foreign exchange and the state of demand in the country. What is important, however, is that from the very beginning the Government and the country should be assured that the firm which has obtained a certain capacity has made all the commitments in terms of plant and machinery to produce the vehicles which it undertakes to do. There would thus be no danger of a programme remaining half completed for a number of years with the result that there is a continuing expenditure of foreign exchange on the import of components.

7.1. Against this background of general considerations we recommend that the target of capacity at the end of the Third Five Year Plan for commercial vehicles should be fixed at 60,000. It is possible that actual demand may not go up to this extent because of the uncertainties to which we have referred earlier. We feel, however, that Government need not restrain the different units from expanding their capacity as much as they like within this overall target.

7.2. There would then be sufficient elbow room to give freedom of choice to the consumer and to ensure the maximum economy in production which competitive conditions and large scale production are conducive to. Moreover it would enable the Fourth Plan period to start without any shortage in regard to transport vehicles.

8.1. The next question which arises is how this capacity is to be achieved. We do not favour the idea of allowing expansion on the basis of any abstract considerations of equity as between the different firms concerned. No pattern need be set by Government in advance. The initiative must come first from the units themselves as to what they propose to do and are able to do. In doing so, they would, if our recommendations are accepted, take into account the possibility of competition in terms of cost, quality and servicing which the other units will be offering them, particularly if the total capacity is somewhat above rather than below the total demand. The consumers' interests will be better served.

8.2. There are, however, certain considerations which in our view would be relevant in taking a decision if the total capacity immediately applied for is in excess of what can be accommodated within the targets recommended. First of all, we think that it would be undesirable to bring in any new units. This is because in the automobile industry the larger the volume of production the larger is the economy in production. It is because of this that even in countries where the demand for automobiles is very much larger the number of producers is relatively small and there is a tendency for various producing units to come together and pool their resources.

In the case of India, there are some other considerations too which have a special force. It takes a long time to build up the necessary technical skill and manpower for an industry like the automobile industry. As the workers gain in efficiency, there would be the possibility of managing the works with fewer employees. If the units keep expanding then as productivity per worker increases, costs will keep coming down and employment will not suffer. Then again from the point of view of foreign exchange expenditure as well as rupee investment much less would need to be spent in expansion programmes than in wholly new programmes. Finally the results to be achieved through expansion schemes rather than new projects would be much quicker.

8.3. In making this recommendation, however, we are conscious that there is one problem of a somewhat special nature which will need to be considered. At present Hindusthan Motors and Premiers are not making any diesel engines and for their trucks they obtain their supplies of engines from Simpsons and Automobile Products of India. A question which Government will need to consider is whether the makers of chassis should be allowed to make their own engines. At one time Premiers had asked for such permission which was refused because there were already two approved manufacturers of diesel engines who do not have any chassis of their own. Later Hindusthan Motors had made a similar request. They were told that Government would be agreeable to Hindusthan Motors developing a petrol engine after they have completed their chassis programme. It appears, however, that they are also anxious to make their own diesel engines particularly as the Bedford diesel engine differs from the Bedford petrol engine only in certain details and in the main the equipment to be installed for making the petrol engine would be identical with what is required for making the diesel engine.

8.4. One of the contentions put forward in favour of the manufacture of engines by the chassis manufacturers is that a vehicle in which the engine and chassis are designed for each other gives a much better performance than a vehicle which is the result of the different makes of engines and chassis being married through a conversion kit. In this connection it has been argued that the success of the Daimler-Benz truck in India is largely due to the vehicle being of an integrated design. This particular argument has special application in respect of Hindusthan Motors' Bedford vehicles because there is a Bedford engine. So far as the Dodge trucks are concerned, we understand that even in their country of origin the Perkins engine is a standard equipment. We would in this context also add that until recently the Bedford truck in the U.K. was also being regularly marketed with the Perkins engine and there was no Bedford diesel engine. The second argument which is advanced by the chassis manufacturers to have their own engine is that the Perkins engine does not have sufficient reserve of power to cope with Indian conditions of road and habitual overloading, while the Daimler-Benz engine has these qualities. In the case of the Bedford engine it is further claimed that it costs less than the Perkins engine and can, therefore, be produced in India more cheaply than the Perkins

engines of Simpsons. Thus it is claimed the cost of the Bedford truck would be further lowered.

8.5. Of the two engine manufacturers Simpsons have done a very satisfactory job. We were greatly impressed by the whole organisation of Simpsons and their methods of control over production and quality. Our assessment of the progress made by A.P.I. with the manufacture of the Meadows engine when our technical committee visited their works was not very satisfactory. We have since heard from them that they have installed the equipment necessary to machine engine and the supply of castings from indigenous sources is also being developed. We understand that their engines have after extensive test been found to be acceptable by the chassis manufacturers. Perkins engines, as we have said above, have been used both on Bedford trucks and on Dodge trucks regularly in the U.K.

8.6. It is not possible to evaluate precisely the extent to which the claim for making of a diesel engine by the chassis manufacturers can be said to be justified on economic and technical considerations. On the other hand, it does not seem to be in doubt that the chassis manufacturers have a strong bias for making their own engines. In these conditions for Government to exercise continuous pressure on the chassis manufacturers to buy their engines from another producer does not seem to us to be an altogether desirable position for the future development of the industry. In particular one problem is likely to arise time and again, namely, the expansion of chassis production may not always be exactly matched by the expansion of engine production. Any imbalance is likely to create a problem. This problem is likely to become the more serious if the industry has expanded a great deal in the present manner.

8.7. It is in our view desirable and important to take a final decision on the subject early and we set forth below our recommendations in order to help Government in arriving at a decision:—

(a) Of the two chassis manufacturers the claim of Hindustan Motors for being allowed to make the Bedford Diesel engine is the stronger for the reason that the Bedford engine has a considerable commonality of parts as between diesel and petrol versions and for the latter Hindustan Motors have already got Government's permission. Furthermore, the Bedford engine is designed for the Bedford chassis. Premier Automobiles have not indicated to us any particular engine which they would like to develop, if permission were given to them, for fitting on to their Dodge vehicle. If they make such a proposal to Government, then the specifications of the engine will need to be studied and compared with the specifications of the engines already available in the country.

(b) If one or both of the chassis manufacturers referred to above are allowed to produce their own diesel engines, the position of the two firms which have already invested in the production of diesel engines would need to be safeguarded. To some extent these engines may find uses for

other purposes such as being fitted in road rollers and tractors and put to industrial uses. Nevertheless without the possibility of selling these engines for commercial vehicles their production may not be absorbed. In that event, some chassis capacity will have to be allowed which will match the surplus production of diesel engines. For this purpose considerations could be given to the introduction of a lighter chassis in the 1½ to 3 ton range, which is at present not covered by any of the existing programmes. In our view, of the two diesel engine manufacturers, the claim of Simpsons would be the stronger for the reason that they have already done a satisfactory job with the production of the engine.

(c) In considering requests either for engine capacity or for chassis capacity the principle should be that there would be no phased manufacturing programme starting from pure assembly to a growing proportion of indigenous content. Instead, the firms concerned should first import the capital goods and market their engines only when they have made the components which it will be their responsibility to produce. Under this approach, not only would the expenditure of foreign exchange be less but there would be no immediate dislocation of supply and marketing arrangements.

9. In order that the expansion programme for commercial vehicles is completed as quickly as possible, we suggest that Government should ask the firms concerned to put in their proposals, having due regard to our recommendations made above, within, say, four months' time. In considering the proposals the Government should take into account the following factors: —

(a) Whether the firm has already completed the manufacturing programmes which have already been approved should be an important test to be applied. For this purpose evidence of all the plant and machinery required for the various programmes in hand having already been ordered should be regarded as a satisfactory basis for considering further expansion. Where, however, a firm has more than one manufacturing programme in hand, care will have to be exercised in approving any new programmes. Experience has shown that by trying to develop too many vehicles of different types at the same time, progress all round has been slow, while units which have concentrated on one line have done better.

(b) The requirements of foreign exchange which the firm needs to undertake its expansion programme should also be given due weight. Some of the units also have replacement needs. It may not always be possible to differentiate between machinery required for rehabilitation and replacement of existing equipment and what is required for expansion. Where a unit has needs under both heads, it should be asked to submit its total picture in as much detail as possible to enable a judgment to be formed.

(c) Government should also ask for an indication of the arrangements for rupee finance not only to pay for plant and machinery, but also for the corresponding rupee expenditure.

10.1. We have in the preceding paragraphs discussed the further development of the production of medium trucks in the country most of which are based on diesel. As regards heavier vehicles we have indicated that no immediate expansion of capacity is necessary. Any increase in demand could be catered for by Ashok Leylands. However, we want to make one point clear. Ashok Leylands have got two vehicles on their programme, the Comet and the Titan. So far as the Comet is concerned, the demand is likely to make the production more and more economic from year to year. For the Titan, the demand is so limited that it is at this stage unwise to consider the Titan as a vehicle with a manufacturing programme on which Ashok Leyland should invest more. If they do so immediately, the danger is that costs would be very high and the expenditure of foreign exchange on plant and machinery will result in a relatively small saving in imports. We understand that Ashok Leyland have made arrangements for making the heavier diesel engine for their Titan trucks. This diesel engine has many uses for industrial purposes also and the programme for making the engine should, therefore, proceed. Ashok Leyland would not, however, be wise in investing anything for the chassis for the Titan—apart from such investments as is common to the Comet programme. We, therefore, feel that for the time being nothing need be done to develop the Titan chassis in India. When State Governments have, however, needs for this type of vehicle, particularly for buses in cities like Calcutta and Bombay, such foreign exchange as Government are able to release to State Governments for this purpose may be used for the import of those components which cannot be supplied by Ashok Leyland or by the ancillary industry.

10.2. A word is necessary about lighter commercial vehicles. They have an important role to play. At present the market for this type of vehicle appears to be small. This is because the vehicles available are in the expensive range. If there were really cheaper vehicles freely available, demand might develop and also provide an outlet for the country's surplus of petrol. To cater for this demand, we do not recommend the setting up of any new units. The investment required for that purpose would be wholly uneconomic. But where any firms have developed petrol engines for other purposes they should be permitted to market light delivery vans and commercial vehicles using the same engines. The conditions governing the approval of such requests could, however, be the same as we have indicated above, namely, that the firm must be ready to face competition and secondly, make the vehicle and not depend on imports of components for assembly in the country.

11.1. We now turn to the question of passenger cars. Our terms of reference had specially asked us to consider the feasibility of producing a small cheap car in India. We had dealt with this question in our Interim Report. In fact, one of the main reasons why we had submitted an Interim Report was to enable Government to

take some action on this particular matter. We had, among other things, recommended that certain tests should be carried out and certain detailed figures obtained from the various firms. We have not heard anything further from Government on the subject and we presume action is being taken by them. Accordingly, we do not propose to make any fresh recommendation on the subject of cheap cars in this report. We reproduce in full our chapter devoted to this subject which formed a part of our Interim Report in the immediately following chapter.

11.2. The only points which we would wish to make in our final report on the question of producing a cheap car are the following:—

(a) The possibility of producing a cheap car depends on planning the production from the very beginning on a fairly large scale. This means that even if one of the existing units manufacturing car takes it up it will have to instal plant and machinery for such production as if a new factory was being planned and it is only in respect of common services like foundry facilities that it could rely on its existing installed machinery.

(b) The field of our choice was necessarily limited by the proposals which we received. We were somewhat disappointed that more vehicle manufacturers did not come forward with programmes of manufacture in collaboration with foreign firms.

(c) As between the different proposals we received, there were no overwhelming reasons for choosing one vehicle as against another.

11.3. In making the final selection, Government will doubtless take into account—

(1) the test reports on the vehicles,

(2) the foreign exchange implications of the programme,

(3) the performance of the applicant firm, and

(4) whether the proposed programmes will adversely affect any existing or new commitments which the same firm may have.

11.4. We also reproduce an extract from our Interim Report regarding the request by Hindustan Motors to revive their manufacturing programme for the Baby Hindustan:—

"Hindustan Motors have put in to us that they should be allowed to revive their manufacturing programme for the Baby Hindustan and they have argued that Government are committed to permit them to do so. It is not for us to take any view on the question whether there is any continuing commitment on the part of Government by virtue of the fact that initially a programme of manufacture for the Baby Hindustan had been approved many years ago. On the merits of the Baby Hindustan manufacture, we have commented in the chapter dealing with

the production of a cheap car. In making our recommendations regarding the production of a cheap car, we have proceeded on the assumption that the cheap car would not be introduced in addition to the Baby Hindustan. In other words, we have treated the Baby Hindustan as one of the many proposals before us out of which only one will be finally selected."

11.5. We now proceed to consider the rest of the passenger car programme on the assumption that Government will approve of a manufacturing programme for a small cheap car after considering our report and the proposals submitted to them. Though the demand in India for cheaper cars is growing there is also a demand for the very much bigger cars of the American type. These are required for long distance journeys, by commercial houses, and for special functions and purposes. The demand for such vehicles is not large enough to sustain their manufacture in India. Premier Automobiles assemble the Dodge cars and supply some components, including the engine, of their own manufacture to them. They need not invest any more in this programme. Permission to import components for assembly may be given as and when considered desirable to meet the demand for this type of cars.

11.6. There is, however, a genuine and more widespread need for a car which is not as big as a Dodge but which nevertheless is bigger than the Hindustan Ambassador. Standard Motors had such a car on their manufacturing programme. This was their Standard Vanguard. The issue of import licences for components for this car was discontinued when the foreign exchange position had become very tight. At that stage Standard Motors had made better progress with the manufacture of the Vanguard than of the Standard 10. They have since made some investments in the Standard 10. Their costs are, however, high. Their progress with manufacture has also been slow. If Fiat cars and Ambassador cars were available in very much larger numbers, their sales even on present prices would suffer. It is our intention that prices of Fiat, and Ambassador should be brought down. In these conditions, the Standard 10 is not likely to find much of a market. The prospect of reducing their costs does not seem to be very bright. For a passenger car to be produced cheaply there must be large turnover. Standard Motors are not equipped to produce in large numbers. There is another problem: The small Standard in the U.K. undergoes frequent changes of design. It will not be possible for Standard Motors to keep on retooling to cope with these changes. It is our view, therefore, that Standard Motors should be allowed to revive their programme for the making of the Standard Vanguard. They should also gradually give up the Standard 10 because as we have explained above when the supply position improves their Standard 10 is not likely to have much of a market.

11.7. We, therefore, consider that the best production pattern for passenger cars would be the new economy car, the Fiat 1100, the Hindusthan Ambassador and the Standard Vanguard. The Dodge may continue on an *ad hoc* basis as at present. The development

of the indigenous content in the Standard Vanguard might be somewhat slow. The other three vehicles should become more than 90 per cent indigenous within two years.

11.8. We do not consider it necessary to earmark or allocate particular figures of production to these vehicles. We feel that the consumers' choice and the size of the market will itself determine the pattern and volume of production. If Premiers or Hindusthan Motors want to expand their production of cars, no restriction need be placed in their way so long they can find a buyer. So far as the new car is concerned, it would be desirable to have a capacity of at least 12,000 vehicles with possibilities of increase. Indeed the whole basis of producing a cheap car will be destroyed if the capacity is for producing only a small number. Disappearance of the Standard 10 as a car will make it easier for the new car to be introduced. We would, however, emphasise that the economy car to be popular and serve the purpose of the public in India, should be a real car and not a miniature car as we had pointed out in our Interim Report and should be capable of carrying four passengers with a reasonable amount of luggage.

11.9. This pattern of production will in a sense got integrated with what we have recommended regarding trucks. Standard Motors will be able to market a light petrol delivery van using the same engine, transmission and axle as their Standard Vanguard car. The 10 H.P. engine which they have already developed for the Standard 10 should also be put to a similar use if they so desire.

12. The target of capacity for the 3rd Five Year Plan for these units should be 30,000 Nos. However if a cheap car is introduced the demand of the existing cars is likely to go down to some extent but there will also be an overall increase in demand to 40,000 Nos. through the creation of a new class of consumers.

13. The current production of jeeps is about 5,500 Nos. per annum which is likely to increase to about 10,000 Nos. by the end of the Third Five Year Plan period. This demand is not adequate to be shared by another unit. On the other hand the price of the Jeep should however come down with increase in production. If this is not assured, consideration may be given to licensing another unit.

14. A point has frequently cropped up in the course of our public hearings, namely, whether it would or would not be desirable for the public sector to take on the production of automobiles for the people (as distinct from production in Ordnance Factories to meet defence needs). We have given a good deal of thought to this question. We do not regard automobile industry to be a preserve of the private sector. If in the very beginning this industry had been developed in the public sector we are inclined to think that certain advantages would have flowed from such an arrangement. It would have been possible to concentrate the demand for cars on a single producer without the dangers of a monopoly in private hands. It might also, we believe, have resulted in avoiding some of the weaknesses which the present industry suffers from and to which we refer later in this report. But there is already a very substantial

investment in rupees and in foreign exchange in this industry. The existing units offer employment to many thousands of workers in different parts of the country. There would be a wastage of national assets if the public sector were to create any capacity which would render the existing installed capacity in the country idle. If at any time the Government and the country feel that the private sector has failed, there might be a case for nationalisation rather than for creating additional capacity in the public sector. In a planned and controlled economy such as ours capacity should not be created, either in the public sector or in the private sector, unless that capacity is needed by the economy as a whole. We have in the course of our enquiry received only one proposal which was sponsored by a public sector unit. We have examined this proposal on merits and our views on the proposal are to be found in the next chapter which deals with the production of an economy car.

CHAPTER VIII

THE PRODUCTION OF A CHEAP CAR

The appointment of the Committee has in the public mind been associated with the question of producing a cheap car in India. Indeed quite often this Committee has been referred to as the Cheap Car Committee. That this should be so, in spite of the very wide terms of reference, only indicates that from the public point of view the most important of the tasks assigned to us is "to examine the feasibility of producing a low-cost passenger car".

1.2. We found abundant evidence of this in the course of the public enquiries when the case for a cheaper car was put to us forcefully. We were told that the class of people whose monthly salary is below a thousand rupees can simply not afford to buy a car at present prices. It was urged that it should be possible to produce a car in India in the price range given to us in our terms of reference. Such a car, it was further pointed out, would have a large sale and attract an entirely new class of consumers.

2. As against this, a number of arguments against the introduction of a new car were also put forward with equal force. These are:—

> The real weakness of the automobile industry, so far as passenger cars are concerned, lies in the fact that there are three producers who share between them a market which is so small. This being the main reason for the high cost of the existing cars, the introduction of a new car would only aggravate the situation and not provide any solution to it.

2.2. The same factors which are responsible for the high price of the cars already being produced will result in high prices for any new vehicle which is taken up for manufacture.

2.3. The main reason for the present dissatisfaction of the consumer is due to the fact that inadequacy of foreign exchange has kept domestic production at a much lower level than it should be. If one more unit is introduced and the same amount of foreign exchange has to be rationed out, there will be a deterioration rather than improvement in the situation.

2.4. Shortage of foreign exchange has also been responsible for slowing down the increase in the indigenous content of automobiles because the capital goods required were not being allowed for import as freely as they might otherwise have been. The production of the new car will accentuate these difficulties still further. It would be much better to allow such foreign exchange, as is available to increase the indigenous content of existing vehicles and thus

reduce the recurring expenditure of foreign exchange than to take on a wholly new commitments.

2.5. The best way to increase the availability of cars at an economic price would be to enable the existing producers to raise their output to a much higher level. Thereby, not only would the present shortage of cars in general disappear but the second-hand market would have substantial supplies of roomy sturdy cars at economic prices, which would be a better answer to the consumers' needs than the miniature cars developed in Europe in very different conditions of living, road transport, size of family, etc.

3. The arguments which we have summarised above raise a fundamental issue. Would it be better and wiser to try to meet the consumers' need for a freer availability of cars at more economic prices by improving the quality, quantity and cheapness of the cars already on the manufacturing programme or whether the right answer lies in the direction of introducing a new vehicle altogether?

3.2. We have debated at great length the pros and cons of the two alternatives posed above. It is not possible for us to say categorically that the first or the second alternative is necessarily the right answer. We consider that, in any event, efforts must be made to ensure the progress and development of the cars already in production. The real question is whether the production of a new car can be sustained in the Indian economy today and whether such production would necessarily mean waste of investment both in rupees and in foreign exchange already made.

4. No one can foresee the future with any degree of accuracy. Therefore, in making our recommendations on the subject we wish to set out clearly the considerations and assumptions on which they are based as well as to suggest certain safeguards which should be adopted to eliminate, so far as is humanly possible, the danger of a major mistake.

4.2. The first consideration which leads us to support the introduction of a new car is that as a result of the study which we have made as well as the statements which the automobile manufacturers themselves have made to us, there is no prospect of the price of any of the cars now being manufactured coming down to the Rs. 5,000—7,000 range.

4.3. The second point which we would make is that the existing production of the industry for the manufacture of passenger cars is unable to cope even with the present demand. Although a cut in foreign exchange had led to a fall in production in 1958, the industry has since then been receiving allocations on a liberal basis. Even so, the backlog of orders has not come down. The total number of orders booked and awaiting delivery at the time when control over distribution was introduced has not shown a decline over the many months that have since elapsed. In other words, new orders have been coming in at a rate equal to the current production of the industry. It could be argued that some fictitious orders and some duplicate orders are being booked. It is equally possible that some people do not book orders when delivery is only a distant hope. In any event, in the normal course of events, demand would continue

to rise. It is not possible in the case of an industry like this to create additional capacity overnight. It would be entirely legitimate, therefore, to augment the present capacity, having regard to the likely demand during the Third Five Year Plan period, even after allowing for such increase in production as may be possible, from the present capacity and which should anyhow be welcome and supported.

4.4. The third consideration is that the increase in demand is much more likely if cars were available at substantially cheaper prices. We see no reason to believe that by shutting out cars costing somewhere around Rs. 6,000 each, it will be possible or justifiable to divert the demand to cars costing Rs. 10,000 or more. At the same time, we hasten to add, there is some possibility that those who were otherwise going in for a car costing Rs. 10,000 might go in for the cheaper vehicle. This may create some problems for the existing industry to which we refer later. But it would not, in our view, be justifiable, if there was a real prospect of cars being available in the future in the price range of Rs. 5000—Rs. 7000, to perpetuate a position in which there is no hope of any being available even at Rs. 8000 or thereabouts.

5. Having stated the main arguments in favour of the introduction of a new cheap car we now proceed to spell out the measures which should be taken firstly, to ensure that the production of the new car is economic and secondly, to ensure that damage to the existing industry is minimised.

5.2. We have based our reasoning above on the importance of cheapness of the car as a major factor influencing the demand for it. We must add that the cost of maintaining a car is no less important a factor. If Government have asked us to examine the possibility of producing a cheap car for the people, we expect that they for their part are determined to see that the cost of maintenance is also brought down. In our chapter dealing with foreign exchange, we have drawn attention to the abnormally high prices for spare parts and servicing which is attributable to the cuts in foreign exchange. Another factor contributing to it is the level of taxation on practically everything which the car owner needs. There is taxation on petrol, excise duties on tyres and batteries, and import duties on spare parts.

5.3. We are not called upon to comment on taxation as such. There have been previous reports and recommendations on the subject not many of which have found acceptance. It is in many ways natural and inevitable that when Government does need higher revenues the class of people who can afford to own cars should have to bear a relatively high proportion of the tax burden. One way of ensuring this is to have indirect taxes affecting the ownership and maintenance of cars.

5.4. An important consideration which must apply to all taxation is whether, while adding to Government's revenues, it does anything else which is undesirable. Recommendation in earlier reports of various bodies for lowering the rate of taxation were made at a time when it was considered desirable to stimulate the demand for motor vehicles both as a means of support to the industry and as a

means of bringing the economic benefits of cheaper transport to the community. In conditions as they prevail today, demand is well in excess of supply and taxes are not acting as a deterrent. In these conditions, there can be no question of reducing taxation as a means of stimulating the demand. Indeed the opposite can well be argued. In Great Britain, for example, when it was considered desirable to restrict the domestic consumption of cars in order to release more for exports high purchase taxes were imposed. In Indian conditions today, when not enough foreign exchange is being given to meet the local demand, high taxes as a restraint on them can be justified.

5.5. But when we look ahead to the position that may arise on the introduction of a new programme of manufacture, we must draw attention to the consideration that, if necessary and if the demand does not otherwise keep up, some sacrifice in taxes may be necessary and justified. In all probability, however, revenue from an increase in demand in automobiles will tend to rise with the sale of more motor vehicles and the exchequer will gain rather than lose in pursuing policies which result in the increased sale of vehicles.

6. We next turn to the foreign exchange implications of a small car programme. For a car which would sell in India for Rs. 6,000 or so and whose annual production and sales would be 10,000 vehicles, there would need to be investment in plant and machinery amounting upto Rs. 4 to 5 crores*. This amount would not necessarily have to be put into the factory producing the car. Part of it may go into ancillary industries as well. The scale of investment in the main plant would also depend on whether it is a wholly new unit or an expansion of an existing unit. The extent to which the production of the car can make use of installed capital equipment will also have a bearing on the figures of total import of plant and machinery.

6.2. In addition, there would be an import bill on account of the components which are not being produced in the country. If the programme proceeds on the basis of an import of the complete vehicle in a knocked-down condition and a progressive development of indigenous manufacture from year to year spread over 4 to 5 years, it is likely that the annual requirements of foreign exchange for a 10,000 vehicle programme would be as follows:—

First year—Rs. 3 crores.

Second year—Rs. 2 crores.

Third year—Rs. 1 crore.

Fourth year—Rs. 50 lakhs or so.
onwards.

6.3. Development of a new car presupposes that extra foreign exchange will be available and that the programme of development and expansion of the existing units will not be affected. We would go farther and recommend that only after certain other priority claims of the automobile industry and road transport industry have been fully met—as indicated in our chapter on foreign exchange—should any allocation of foreign exchange be made for the new programme.

* The Rs. 4 to 5 crores referred to in para 6 above represents the foreign exchange required for imported plant and equipment.

6.4. Anyhow, it is important to ensure that the expenditure of foreign exchange on the development of the new vehicle should be kept to the minimum. We enumerate below the main possibilities of achieving economy in this respect:—

6.4.1. In choosing the vehicle to be manufactured utmost care should be taken to see that it would not involve the establishment of highly expensive machinery which can only be sustained economically if the demand runs to a very high figure.

6.4.2. The scheme should be based on making full use of existing capacity in the country wherever it may exist.

6.4.3. The programme of manufacture should not be based on imports of complete c.k.d. packs to begin with and an increase in indigenous content at a slow rate from year to year. Instead, the manufacturer should be expected to achieve a high level of indigenous content in the vehicle from the very start and should complete his programme within 2 or 3 years at the very most. This will also mean that the existing industry will not face competition from an imported vehicle.

7. The next and perhaps the most important question is that of choosing a suitable car and the agency for its manufacture. The Committee received many proposals from different firms and interest. But practically all the proposals related to vehicles which have not been tried out in India in Indian conditions. Considering the seriousness of the choice it is of the utmost importance that every care should be taken to avoid making a mistake and going in for a vehicle which for any reason does not quite answer the needs of the class of consumers for whom the vehicle is intended.

7.2. We are separately submitting to Government the full details of the proposals received by the Committee. We refrain from making a specific recommendation in favour of a particular vehicle for two reasons. Firstly, as pointed out above, we consider it unsound to form a judgment by merely looking at vehicles which have been imported to be shown to us. In England, before new models of cars are exhibited at the Olympia show, most of them have been subjected to rigid and prolonged tests by independent agencies. Before a final choice is made, we recommend that the vehicles in question should be tested out for a minimum period of three months and a minimum mileage of three to five thousand miles in which their sturdiness, their consumption both of fuel and oil and their general performance should be studied. Such facilities, we understand, are available with the Defence Ministry and the Automobile Associations could also help. We do not wish to delay our report until such tests have been carried out though we could, if called upon to do so, offer our further comments after such tests have been completed.

7.3. The second reason for our not making a specific choice among the vehicles covered by the proposals received by us is that, in almost all cases, it should be necessary for Government to have further discussions with the Indian applicant and with the overseas firm with whose collaboration the vehicle is to be manufactured. To make a final choice before such negotiations have taken place would weaken the negotiating position of the Government.

8. We accordingly proceed to set out below the considerations which should govern the choice of the car to be produced in India.

8.2. The first point to look for in the vehicle is the cheapness. It is not easy to foretell what the cost of production in India would be. There are, however, a number of factors which can make an assessment possible. First of all, there is the price of the car in its country of origin. Secondly, there would be or should be a firm quotation for the complete c.k.d. pack of the vehicle if it is imported. Based on these two factors, at least an approximate guess can be made of the likely cost of production in India having regard to the experience we already have in the matter. It would also be appropriate for the assessment of the cost of production in India to take account of the kind of investment contemplated. In general, the lower the ratio of the additional investment to the expected turnover, the more economic would production be, provided the investment figure is realistic having regard to the programme of manufacture envisaged. Lastly, importance should be attached to the kind of assurance or guarantee which the Indian firm concerned is able to give of adhering to the price ceiling indicated by it.

8.3. The cheap car has to be cheap not only in initial cost but also in the running and maintenance cost as compared with the cars now already under manufacture. The claims put forward regarding cheapness in fuel consumption should, in particular, be tested and verified on Indian roads.

8.4. The third factor would be the consideration of sturdiness and spaciousness. Many of the very cheap cars marketed in Europe are suitable for bachelors or married couples without children and designed for extremely good road conditions. In Indian conditions, some sacrifice of cheapness may be necessary with a view to have ample room not only for passengers but also for luggage. Arrangements in regard to ventilation and the performance of the car in high temperatures are also to be looked into.

9. The next issue which we want to discuss in general terms is the agency which should be employed for the manufacture of an economic car. The choice lies between entrusting the task to one of the existing firms or to an altogether new firm or to a consortium to be set up by the automobile industry or to undertake production in the public sector.

9.2. Of these, we consider the setting up of an altogether new unit as undesirable for the following reasons:—

9.2.1. A wholly new unit will take much longer to get into production and to train its labour force.

9.2.2. If a wholly new unit is set up on the basis of promises given regarding the ultimate selling price of the vehicle and if, in actual fact, the costs turn out to be high, it would be very difficult to enforce sales at the prices originally agreed upon because the unit may then have to face a closure. On the other hand, a unit which is producing other vehicles also, can be compelled to take a loss if necessary on the sale of the particular vehicle which is developed as an economy car.

9.2.3. A wholly new unit will not be able to spread its overheads over as large a volume of business as an existing unit. Many of the installed facilities on an existing unit can be used for the manufacture of the new vehicle thereby reducing costs and expenditure of foreign exchange on plant and machinery.

9.3. The advantages of combining the production of a new economy car with an existing production programme have been indicated in the preceding paragraph. These advantages would be the greater if it were possible to evolve a plan of manufacture in which the entire automobile industry could participate*. Our discussions with the spokesmen of the industry do not, however, give us reason to believe that a joint venture of this kind is a practical proposition. It would still be an advantage if the production programme could be shared by more than one unit in the automobile industry even though all units do not co-operate. Such an arrangement can only result from discussions in which Government should be a party and we as a Committee have not felt it to be within our competence to put forward any proposals of this nature, to the industry. We have, therefore, had to confine our examination to the actual propositions before us put forward by different applicants.

10. We have received altogether 24 proposals relating to the manufacture of a baby car. Some of these proposals were merely letters containing nothing more than a statement to the effect that the party concerned is desirous of and able to manufacture a vehicle at a cheap price. Others have given some details but not what we would call a manufacturing programme. On the whole, the well-thought-out proposals which we have received have come either from firms already engaged in the manufacture of an automobile or from firms who are otherwise engaged in manufacture in allied fields. There is also one proposal from the public sector from Hindustan Aircraft Ltd.

10.2. Among the offers received by us, those which did not give any details on essential points such as the cost of plant and machinery to be imported, the rate and stages in which the manufacturing programme will be completed and the estimated price of the vehicle in India and other relevant factors could naturally not be considered by the Committee at all. It is possible that given time, some at least of the individuals and firms concerned would have been able to put forward something which were nearer a definite proposal. As

*During the discussions the representatives of Hindustan Motors stated that a decrease of Rs. 500 in the price of the Ambassador car may be possible if production went above 18,000 a year (other factors such as wages remaining constant). This also gives an indication of the extent of possible economy in the manufacture of Baby Hindustan due to its commonality with Ambassador of a few components of the rear axle and the front suspension—parts of which only are manufactured by Hindustan Motors themselves. The representatives of Standard felt that even with a production level of 6,000 their price would not go down. According to the representatives of Premiers, the price of the Fiat 1100 could be reduced by about Rs. 300 per car if production went up from 3,500 to 6,000. They also indicated that the reduction could amount to Rs. 600 per car if production went upto 10,000 and with a production of 15,000 the reduction may be Rs. 1,000 per car. We would add that for raising production to the levels indicated by Hindustan or Premiers substantial addition to the plant and machinery would probably be necessary. In the case of the Hindustan we were told that the existing plant being old stands in need of replacement on a major scale and it is apparently their intention that in doing so they would instal machinery which would be capable of higher production at a lower cost.

the life of the Committee itself is limited, we have been unable to wait for such detailed proposals. The list of cases falling in this category is shown in Appendix V. In the absence of details, we offer no comments on these schemes.

11. We have stated earlier that one of the most important factors which will influence the success of the cheap car programme is the choice of a suitable vehicle for manufacture and have also set out the main factors that should be taken into account. Here, a fundamental choice has to be made between what we would call cars of the conventional type and miniature cars. The miniature car has been, we understand, very popular in post-war Europe. We gather that not all of them have been equally successful. Also, though on the whole the popularity of the miniature car in European conditions is not in doubt, there are indications that this is progressively on the decline otherwise. Will these cars have a future in India and is there a large demand for them? The Tariff Commission in its second enquiry had come to the conclusion that one of the schemes for making a car of this type would not really be suitable for Indian conditions of road, size of family, climatic conditions, etc. We have given further thought to the matter. We are inclined to think that in cities like Calcutta, Bombay, Delhi and Madras, there might be demand for a vehicle of this nature from the class of people who find the scooter or motor cycle somewhat inadequate for their needs and yet are not quite in a position to contemplate the purchase of a full-fledged car of the conventional type. We have not made a detailed study of the actual level of demand which there might be for this type of vehicle. We consider, however, that this type of a vehicle is not the answer to the question posed to this Committee by its terms of reference. In other words, in our view, the development of a miniature car should be considered in the context of the expansion of the capacity sanctioned for making scooters, motor cycles and other two-wheeled and three-wheeled vehicles. In the case of miniature cars too, we have received proposals which are detailed and others which are at this stage only an indication of intentions rather than a programme of manufacture. A list of the cases falling in this category is shown in Appendix 'VI'. Of these, only the proposal of Bachraj Trading Corporation has one attractive feature to which we want to draw attention. In view of the large commonality of components between the proposed vehicle and the three-wheeler for which the firm has already been licensed to manufacture, the scheme can be developed with a relatively low increase in foreign exchange expenditure. For the reasons stated above, however, we consider the proposal to be one of limited scope and not an answer to the problem put to us. Whatever decision Government might take about this or any other proposal of this type would not affect our recommendations regarding the automobile industry as a whole.

12. Our field of choice has thus narrowed down to the following proposals, which are set out below in alphabetical order:—

(i) Proposal from Hindustan Aircraft Ltd. to make a car designed by an engineer who is now in their employment.

(ii) Proposal of Hindustan Motors Ltd. to make the Baby Hindustan car or the newly introduced Mini Minor.

(iii) Proposal of Mahindra & Mahindra Ltd. to make the Renault Dauphinoise.

(iv) Proposal of Premier Automobiles to make the Fiat 600.

(v) Proposal of TELCO to make the D.K.W.

13. We offer below our comments on these proposals with special regard to the criteria indicated by us earlier in this Chapter:—

13.1. **Proposal from Hindustan Aircraft Ltd.**—We have every admiration for the efforts made to produce a real indigenous car suited to Indian conditions rather than copying models made elsewhere. Mr. Reddy, had, we understand, designed this car when he was working in Praga Tools and has since been able to do further work on it after joining Hindustan Aircraft Ltd. We have been shown a small model of this car but we have not the opportunity of seeing a prototype on the road. It is the normal practice even when a new car is developed by a team of engineers who do nothing else but design cars to subject the vehicle to intensive tests in regard to performance and also to make changes in it from the point of view of facilitating manufacture. In the extremely difficult conditions under which Mr. Reddy had produced the design of a car, it is even more necessary to have such tests. There is the further consideration that unless such tests have been made the potential buyer in India would be naturally hesitant to make what to him is a large investment in buying an unknown product. We, therefore, hope that all encouragement and facilities will be given by Government to have prototype of this vehicle made and tested out. For the present, however, we are unable to recommend the production of this car as an answer to the question put to us nor can we suggest that the whole question of producing a cheap car should be deferred until this car has been perfected and brought into regular production.

13.2. **Proposal from Hindustan Motors Ltd.**—Hindustan Motors have placed before us two proposals. One is for the Baby Hindustan which they have assembled in the past and the other is for the newly introduced Mini Minor. So far as the former is concerned, their selling price on a pure assembly basis in the past has been Rs. 7,638/- ex-factory and Rs. 8,399/- to the consumer. They have informed us, however, that they propose to sell the Baby Hindustan car at a price of Rs. 6,800/- ex-factory and a retail price to the consumer of Rs. 7,300/-. The corresponding price of the two-door model will be Rs. 6,550/- and Rs. 6,950/- respectively. The prices of these cars in U.K. are £ 441 or Rs. 5,880/- and £ 416 or Rs. 5,546/- respectively exclusive of purchase tax. Hindustan Motors claim that they need capital goods worth Rs. 60 lakhs only for the manufacture of this car. A detailed and complete manufacturing programme has, however, not been placed before the Committee.

13.2.2. As for the Mini Minor, its selling price has been indicated as Rs. 6,850/- with an ex-factory price of Rs. 6,350/-. Assuming that the ex-factory price is correctly estimated, then if the normal margin of profit at present given to dealers (namely 10%) was retained, the selling price would be Rs. 6,985/- which is very close to but still within the ceiling. We have not been given any indication of the price at which the c.k.d. components will be available but we understand that the price of the built-up car in the U.K. will be £ 356 or

Rs. 4,666/- without sales tax. For purposes of comparison, the price of Morris Oxford in England is £ 575 or Rs. 7,666/- without purchase tax and the price of Hindustan Ambassador ex-factory is Rs. 10,506/-.

13.2.3. The project will require according to Hindustan Motors an investment of Rs. 2 crores in plant and machinery which will have to be imported. They have also indicated to the Committee a fairly large programme of expenditure on capital goods for their programmes in hand, for replacement as well as modernisation. They have made no specific proposals for raising the foreign exchange needed. Their production programme is one of starting with assembly and attaining the level reached by Hindustan Ambassador at present in two to two and a half years time. We have however no definite indication about the rate at which the different components will be developed for manufacture. We are also not clear whether the production of all the body panels is or is not included in the above programme. We are also not clear as to why the Mini Minor will need Rs. 140 lakhs more of plant and machinery than the Baby Hindustan having regard to the fact that the latter is a heavier and more expensive vehicle and the only common part it has apparently with the Ambassador is a part of the axle and suspension.**

13.2.4. Hindustan Motors' record of progress with the indigenous manufacture of the Ambassador car is outstandingly good. Their performance regarding the Studebaker and Baby Hindustan was not so satisfactory. They have at present to develop the manufacture of Bedford trucks for which they have ordered much of the plant and machinery but the real problems of manufacturing have yet to be tackled.

13.3. **Proposal from Mahindra & Mahindra Ltd.**—The Dauphionoise which Mahindra and Mahindra propose to manufacture in collaboration with Renault of France will according to them have an ex-factory price, without profit, of Rs. 5,210/-. Adding profits for manufacturer and dealer at present rates, the selling price would be Rs. 6,304/-. The selling price in France of the built-up vehicle is Rs. 5,800/-. The production of this model, it is intended, will be discontinued in France. So, the entire plant (except for the plant for the making of the engine) will be transferred to India. For making the engine, a new plant will be imported. The proposal here is to introduce a model which is being discontinued in the country of origin. In our view the fact that a model of a car is being abandoned abroad is not itself a reason to consider it unsuitable for India. Indeed, there are many vehicles whose production abroad has been discontinued which did admirably well in Indian conditions and

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**In a later estimate made in October, 1959 M/s. Hindustan Motors have intimated that this amount will suffice for the manufacture of only the engine and gear box. To bring the indigenous contents to the current level of indigenous content of the Hindustan Ambassador, they would require an additional Rs. 90 lakhs in foreign exchange. The manufacturing programme of Hindustan Ambassador is practically complete except that body panels are manufactured to the extent of 60% by value only and the firm would require Rs. 1 crore in foreign exchange for presses and dies to make the remaining 40% of the body panels of the Ambassador. In another communication dated 24th October, 1959, Hindustan Motors have intimated that the expenditure to the extent of Rs. 150 lakhs needed for modernisation has to be taken note of in comparing the foreign exchange costs of Baby Hindustan and MINI Minor.

whose production in India would have been quite attractive. However, this car has not been tried in India. We, therefore, feel that judgment on this car, as on the others, should be based on tests made in India and the fact that the production abroad is being discontinued should not influence this judgment. Another point arising out of the same feature is that the machinery to be imported will be second-hand. This again can be a favourable consideration if the machinery is good and prices considerably reduced. On the other hand if the machinery has outlived its usefulness it may well be a major drawback. The fact that Renault propose to retain an interest to the extent of 49% of the capital is a favourable indication in this context.

13.3 2. The total value of their import of the plant is indicated as Rs. 2·5 crores apparently because the second-hand machinery is coming at a cheaper price. Renault will invest about Rs. 1·2 crores in the plant and, therefore, foreign exchange still to be covered will amount to Rs. 1·2 crores for which the possibility of a credit has been indicated.

13.3.3. The firm expect to start production in 18 months from date of approval, when the indigenous content will be 50%. In another 6 months, the percentage will be raised to 63 and in a further 6 months to 77. Thereafter over a 15 months' period the indigenous content will be raised to 91%.

13.3.4. The firm's progress on the manufacture of Jeeps has been satisfactory and their control over prices both on items produced by them and on items produced by ancillary industry is satisfactory. They have no other vehicle under development.

13.4. **Proposal from Premier Automobiles Ltd.**—They propose to manufacture the Fiat 600 for which they indicate an ex-factory price of Rs. 6,569/- and a selling price of Rs. 7.226/-. The price of the complete c.k.d. pack for the Fiat 600 has been indicated as £ 235 which is roughly equal to Rs. 3,140/-. For purposes of comparison, one can observe that the complete c.k.d. pack of a Fiat 1100, which Premiers are now producing costs Rs. 4,063/- and the ex-factory price of the vehicle in India is Rs. 8,875/-. The selling price of the vehicle is outside the range indicated by our terms of reference though the ex-factory price is within it.

13.4.2. The requirements of capital plant and machinery to be imported have been given as Rs. 2·5 crores for the first stage in which they hope to make 50 per cent of the car in India and an additional Rs. 3 crores for the balance of their manufacturing programme, which will make the car 75 per cent indigenous. They have indicated that Fiats will give them credit and assistance to finance the foreign exchange expenditure on the plant.

13 4.3. Their manufacturing programme is spread over 5 years. During the first 18 months, the indigenous content will be about 20 to 25 per cent which means only the deletion of items like tyres, batteries, etc. which are anyhow not allowed for import. During the next 18 months they expect to get to 50 per cent indigenous production and in another 2 years they will reach 75 per cent.

13.4.4. Premier Automobiles have at present on their manufacturing programme the Fiat 1100 car and the Dodge group of commercial vehicles. They have not yet completed either of these programmes and are much behind schedule.

13.5. **Proposal from Tata Locomotive & Engg. Co. Ltd.**—The D.K.W. which they have proposed for manufacture will according to them have an ex-factory price of Rs. 6,950/- and a selling price of Rs. 7,350/-. The allowance for the normal margin to dealers has been cut down to keep the consumer price low. The ex-factory price is just within and the selling price is above the price range indicated by Government. We understand that Tatas expect to obtain their c.k.d. pack at Rs. 4,082/- ex-factory Germany. This has to be compared with the price of c.k.d. pack for their Mercedes truck, which is Rs. 13,504/- ex-factory Germany and the ex-factory price for the Indian truck, of Rs. 24,950/-. The selling price of D.K.W. car and Mercedes Benz truck in Germany exclusive of local taxes etc. is Rs. 5,692/- and Rs. 21,043/- respectively. Tatas are ready to guarantee this price.

13.5.2. They have indicated a capital investment of Rs. 14 crores in the project of which Rs. 5·5 crores will be in foreign exchange and the balance will be distributed almost equally between a labour colony and other rupee expenditure. They have also reported that they expect a long term foreign exchange loan repayable over 25 years if necessary, to finance the import of the plant. They propose to develop production in three stages of one year each, the indigenous content being 60 per cent, 70 per cent and 80 per cent respectively at the end of each stage. Telcos have completed their manufacturing programme for the Mercedes Benz truck according to schedule.

14. Further details of these five proposals are given in Appendix 'VII'.

15. Having analysed the various proposals, we wish to set out below in a tabular form the relevant specifications of the vehicles referred to above in order to facilitate a comparison:—

Specification	Hindustan Aircraft	Mini Minor	Renault Dauphinoise	Fiat 600	D.K.W.
Overall length	150·0″	120·50″	147·63″	126·6″	155·5″
Overall Width	60·0″	55·0″	55·11″	54·3″	62·2″
Overall Height	58·0″	53·0″	59·05″	55·3″	55·1″
Head space (front)	..	40·0″	36·22″	37·0″	37·2″
Head space (rear)	..	36·0″	33·46″	32·3″	34·5″
Sitting space (front)	..	2 seats of 19·5″	..	49·2″	52·8″
Do. (rear)	..	52·5″	..	48·4″	52·0″
Leg space (front)	..	37·5″	..	38·0″	41·3″
Leg space (rear)	..	..	..	39·0″	37·0″
Knee space (rear)	..	12·0″	..	7·5″	10·2″
Car weight (in lbs.)	2,000	1,316 (unladen)	2,556 (laden)	1,290 (unladen)	1,485 (unladen)
B. H. P.	20	37·0	26·0	22·0	39
Weight/BHP	100	..	98·0	58·6	38

NOTE :—The Dauphinoise proposed by Mahindra and Mahindra is a Station Wagon model.

16. In conclusion we would like to make one observation. We have at the beginning of the Chapter drawn attention to the many conflicting considerations which were placed before the Committee when considering the question of the production of a cheap car. We have in the preceding paragraphs set out our views on this subject. The views are necessarily of the Committee as a whole rather than of each of its members individually. Each of us inevitably had a somewhat different approach to the problem either in broad terms or on points of detail. These differences have been resolved during the course of our discussions. It has, however, not been possible for us to carry one of our colleagues with us in the matter. Prof. B. N. Das Gupta holds radically different views on the subject and we have all agreed that in fairness to him and to the point of view which he represents, it would be desirable that he should set out his views on the subject in full in a minute of dissent, which is placed at Annexure I of this report.

CHAPTER IX

INVESTMENT AND TAXATION

1.1. Having indicated our views as to the likely demand for vehicles and how capacity to meet it should be created, we now turn to a consideration of the resources required for such development and other associated matters.

1.2. Our Technical Committee had made an assessment of the existing installed capacity of the industry and the production which could be expected from them. The following table sets out this assessment :—

Ashok Leyland	Comet Titan	3,000
Hindustan Motors	Ambassador Bedford	10,000 5,000
Mahindra and Mahindra	Jeep Station Wagon	5,500
Premier Automobiles	Fiat 1100	7,200
	Dodge 3 tons Dodge 1 ton	7,000
	Petroleum engines	3,000
Telco	Bus and Truck	12,000
Standard Motors	Standard 10 Vanguard	3,000

The Sub-Committee assessment has been based on the following assumptions:—

(a) The stage of deletions is that which exists today, allowances being made only in regard to those components for which a firm plan of manufacture exists and the plant requirement have been approved by the C. & I. Ministry and import licences have been granted.

(b) That the firms will do all that lies in their power to make the best utilisation of their resources.

(c) Where no proposals for enhancing capacity in a place which today presents a bottle-neck have come to the knowledge of the Sub-Committee, the total capacity has been restricted to the numbers which can be manufactured in the bottle-neck section.

(d) In cases where local manufacture is claimed a deduction has been made in the capacity to provide for the manufacture of replacement parts, where such manufacture is not today being undertaken.

1.3. In quoting these figures we would like to emphasise that these are not to be taken as anything more than a broad assessment.

It was obviously not possible for the Technical Committee to make a detailed study of the capacity in every section of the different factories. The output of each factory could exceed assessed capacity set out above:—

(a) by increasing efficiency,

(b) by making fuller use of facilities in ancillary industries,

(c) by introducing shift working either in the whole plant or in sections of it, and

(d) by the addition of balancing plant.

1.4. Comparing the targets set out in Chapter VII with the above assessment, it is possible to say that the extra capacity needed for commercial vehicles would be roughly equal to 32,000 vehicles. For passenger cars, the position is less clear-cut because a good deal would depend upon the final decision of Government regarding the economy car.

2.1. It would be useful to consider the kind of fixed investment, which this programme of expansion would entail. In order to make such an assessment we had studied the position of TELCO as they have completed their phased programme of manufacture and as they have from the very beginning planned out the requirements of fixed assets to fulfil their programme.

2.2. The details of the fixed investment by TELCO to complete their first programme of 7,200 vehicles are set out below:—

	Rs. in lakhs
Factory Building . . .	314
Plant and machinery .	928
Other factory equipments .	47
Ancillary assets like vehicles, etc.	51
Colony	156
TOTAL .	1,496

2.3. The capacity of this factory without taking into consideration the expansion programme is stated to be 7,200 vehicles *Plus* 10 per cent. towards spares or in all about 8,000 vehicles. In case the efficiency of labour (at present 70 per cent. of the foreign German standard) is further improved, which in our view should be possible, the capacity could be stepped up to about 10,000 vehicles per annum. On this basis, the investment per vehicle would be as under:—

	Rs.
Buildings	3,100
Plant and machinery and other factory equipments	9,750
Other ancillary assets . .	500
Total (excluding colony) .	13,350

2.4. It is of course not necessary that the order of investment per commercial vehicle should be necessarily the same as in the case of TELCO. The volume of investment in TELCO has been influenced by its own background and plans for development. Similarly in the case of the other units, there will be special features in each of them, which may take the order of requisite investment higher or lower.

2.5. For case of calculation and taking into account the fact that we are dealing with figures which are in the nature of approximations rather than estimates, we would suggest that we should take Rs. 10,000 per commercial vehicle as the requirement of plant and machinery and other ancillary assets and Rs. 3,000 per vehicle as the requirements of buildings (other than workers' colonies). On this basis the total investment required for commercial vehicles on the target suggested by us would be Rs. 60 crores on plant and machinery and Rs. 18·0 crores on buildings. Taking into account the investment required for jeeps also, the total investment for jeeps and commercial vehicles would be Rs. 67 crores for plant and machinery and Rs. 19·5 crores for land and buildings.

2.6. The investment so far made by Tatas, Premiers and Ashok Leylands can be roughly estimated at about Rs. 4 crores in factory buildings and Rs. 12 crores in plant and machinery. Hindustan Motors' plant and machinery for their truck programme has yet to be installed, but they have on order or about to be ordered against valid import licences machinery worth Rs. 2·15 crores and some site and other facilities previously used for Studebaker programme are also available. Similarly, the existing firms also have on order various types of equipment and have even installed some of it subsequent to the date for which we have taken the figures of investment above. Finally, we should in this reckoning also take into account the investment made by the two engine manufacturers and jeep manufacturer. Taking all these into account it is our estimate that a further investment likely to be made by the end of the Second Five Year Plan in the production of commercial vehicles and jeep leaving aside the ancillary industry would be Rs. 1 crore in land and buildings and Rs. 5 crores in plant and equipment. Therefore the additional investment necessary in the Third Plan period on commercial vehicles and jeep would be Rs. 13·5 crores in land and buildings and Rs. 46 crores in plant and machinery.

3.1. The extent to which the plant and machinery to be installed would need to be imported would depend upon the development in other industries particularly the machine tool industry. However, we must remember that alongside all the investment by the automobile manufacturer there must be a good deal of investment in the ancillary industry to keep pace with the programme of development. In assessing the foreign exchange needs, therefore, it would be safer to assume that whatever saving there might be on account of the supply of plant and equipment from indigenous sources to the main vehicle producers would be more than offset by the requirements of foreign exchange of the ancillary industry. On the whole, therefore, the foreign exchange needed by the automobile industry as a whole including the ancillary industry had better be taken as a little higher than the figure indicated above.

4.1. Turning to cars, the position is somewhat confused. This is because we do not have any plant in India which has been planned from the beginning for a certain volume of production of passenger cars. The best guide so far as Indian experience goes is Hindustan Motors but even in their case the investment was made many years ago when price levels were different and they also have indicated to us that there would be major requirements of replacement of their existing plant and machinery.

4.2. So far as the production of a new car is concerned, the schemes submitted contain a broad picture of the order of investment required. Depending upon which scheme is selected, a broad assessment of the requirements of investment which will to a considerable extent be only in the Third Five Year Plan can be made.

4.3. So far as the existing firms are concerned, they would need to invest mainly to complete their manufacturing programme and to provide for replacement of installed equipment in order to improve efficiency. Their higher output in the Third Plan will in the main depend upon increased efficiency and fuller use of installed capacity. We can for this purpose attempt only a very rough guess of what the requirements would be. In our view, based on certain calculations made for us by the Chief Cost Accounts Officer, the existing investment for the making of passenger cars would be equivalent at present prices to Rs. 12 crores of which Rs. 10 crores would be in plant and machinery and Rs. 2 crores in land and building. It is our estimate that the additional amount likely to be invested by the end of the Second Five Year Plan would be Rs. 3·5 crores for plant and equipment and Rs. 0·5 crore for land and building. In the Third Five Year Plan, the additional investment would be Rs. 7 crores for plant and machinery and Rs. 1·5 crores for land and buildings. If there is a shortfall of investment in the last year of the Second Five Year Plan, there will be a corresponding increase in investment in the Third Five Year Plan. It should be noted that this investment includes the development of some light petrol driven commercial vehicles. We would also add that for passenger cars dependence on ancillary industry would be much greater than in the case of trucks and, therefore, sizeable investment in the ancillary industry would also be necessary.

5.1. It would be relevant at this juncture to consider the question of taxation. We have pointed out earlier that in the price of the vehicle paid by the consumer taxation plays a significant part. In today's conditions the level of taxation is not hurting the indigenous producer because the demand is in excess of supply. In other words, today taxation is a burden on the consumer rather than on the producer.

5.2. It is not for us to make any recommendations regarding the levels of taxation in general and the share of it which should fall on the owner of automobiles. We are however concerned to see that whatever the levels of taxation they should be imposed in such a manner as to help rather than frustrate the future development of the automobile industry on sound economic lines.

6.1. The first point which the taxation policy should bear in mind is that it should encourage in every possible way the increase in the indigenous content of vehicles. Import duties have always played a significant part in encouraging domestic industry. In the case of the automobile industry, Government had refrained from raising import duties to the levels recommended by the Tariff Commission because they had felt that such high duties would raise the price of the vehicle to the consumer unnecessarily at a time when the imported element in each vehicle was high. We would ourselves be averse to any measure of taxation which would raise the cost of the indigenous vehicles further at a time when there is a general anxiety to see lower prices.

6.2. On the other hand, there are certain anomalies. The import duty on different components of automobiles varies. This creates a certain amount of confusion and avoidable work at the time when imported components are cleared through Customs. In the accounts of a factory and particularly in looking at the cost structure these different rates of duty create a further complication and necessitate very detailed work. There is a great deal to be gained by introducing uniformity. We recommend that Government might with advantage consider fixing a uniform rate of import duty on all automobile components.

6.3. Another anomaly which exists is that when a built-up commercial vehicle is imported, the import duty paid on it is less than the average duty paid on components when imported as components. In the cases of cars this normally does not exist and built-up cars are subject to a higher rate of duty. We suggest that a similar policy should be followed in regard to built-up commercial vehicles and built-up automotive engines.

7.1. In attempting to introduce uniform rates of duties for all automobile components there are two alternatives open. One would be to work out a weighted average of the present rates of duty and make it effective as a uniform rate of duty. Under this arrangement the total incidence of import duties will remain unaltered.

7.2. The second alternative would be to make the duty which applies to most components applicable to all components. At present a number of components are being imported at relatively low rates of duty. The alternatives which we are considering in this paragraph would mean that duties on these components would go up. This would have some advantages and also one major disadvantage The alternative would be that the increased duties would give greater protection to domestic production either by the automobile manufacturers or by the ancillary industry. Experience has shown that the cost of production in India is higher than the landed cost of most components. If the rate of import duty on any component is low then the domestic production of that item would tend to raise Indian prices somewhat disproportionately. Therefore, there is much to be gained by raising import duties on those components which are being today assessed to relatively low rates of import

duty. This arrangement would have the further advantage of any internal competition. A vehicle with a higher indigenous content would not be handicapped *vis-a-vis* a vehicle which has a preponderance of imported components.

7.3. The disadvantage in this arrangement would be to increase the cost of vehicles produced in India immediately because all vehicles have a certain proportion of imported components and the percentage of lower duty components is rather high. This is something which we would wish to avoid at all costs and we hope Government will take the same view. To meet this situation we would make the recommendation that the exise duties on tyres, tubes and batteries should be waived when they go as original equipment. This reduction will offset the increase in import duties and would in fact in some cases result in a reduction of consumer price. It is our judgment that the effects of these changes on revenues would not be significant and indeed there are possibilities of revenues going up.

7.4. In this context we would also suggest that it might be an advantage in later years to keep on increasing the import duty on components. Such a step will mean that any firm which is slow in its manufacturing programme will find itself getting priced out in the domestic market while a firm which moves ahead with its production programme will be able to retain a competitive advantage.

7.5. If our recommendations regarding adjustment in duties are accepted by Government, then the price cut in the case of passenger cars which we have recommended would need to be readjusted somewhat. The extent of this readjustment can be worked out once final decisions regarding the adjustment in duties have been made. So far as trucks are concerned, we have recommended a decontrol of prices. The benefit to the truck manufacturer by a reduction in excise duties would be larger than in the case of passenger cars. As a matter of long-term policy, it is in our view desirable that tyres supplied as original equipment should be available to the automobile manufacturers at a lower price. Government may, therefore, give serious consideration to allowing the exemption from excise duties to the manufacturers of commercial vehicles also provided the benefit of the net reduction resulting from an adjustment of import and excise duties is passed on to the consumer. In our view, with the increase in production, which is likely in 1960 and even more in the coming years, each producer will have to do everything possible to keep prices down and the benefit of reduction in duties will ultimately go to the consumer. In the immediate future the change recommended by us would be introduced even if Government were not prepared to waive excise duties on tyres and batteries *in toto* in the case of commercial vehicles.

8.1. Although we have not seen it fit to recommend reductions in taxes in the immediate future. we would add that the taxation policy applicable to the automobile industry should be influenced more by long-term rather than short-term considerations. In our judgment the level of taxation per vehicle, as it leaves the factory, would in course of time have to be lower. This will not mean a

decline in revenues. There will be a larger number of vehicles sold and there will also be a fairly good return in the shape of recurrent taxation on fuel, replacements, etc. It would therefore be as much in the interests of revenues as of the development of the automobile industry if the taxation policy was such as to keep demand for vehicles at as high a level as the automobile industry could possibly cope with.

CHAPTER X

PRICE POLICY

1.1. We have in earlier chapters pointed out that although there are certain reasons outside the control of the industry for which prices in India tend to be high, there is good reason to believe that there is room for economy and for improving efficiency in order to bring costs and prices down.

1.2. One of the reasons why attention to cost has been inadequate is that the demand for vehicles is in excess of the available supply. The other factor which in our view has led to inadequate attention being paid to costs is the system of price control which is now in force. We propose to discuss this subject in this chapter. The question of the ways in which competitive conditions can be restored has been discussed elsewhere in this report.

2.1. The Tariff Commission, in its 1956 enquiry, while examining the fair ex-works prices of various types of motor vehicles manufactured in the country and the basis on which the prices should be revised from time to time as more and more components were produced in the country stated that "at the present stage the cost structure of this industry is liable to changes of such nature and magnitude that having regard to the trading conditions affecting the different vehicles, the choice as regards the timing of the necessary price adjustment is best left to the manufacturers themselves. This may lead to vehicles being sold above or below their fair prices at different times, but such deviations should not necessarily be open to objection, provided they are no more than necessary to even out the costs over a period and thus maintain the stability of the prices". Government were broadly in agreement with the recommendation of the Commission and decided to leave the automobile manufacturers free to revise their prices from time to time subject to one month's notice of any variation being given to Government, so that if the change proposed was *prima facie* unreasonable, the Government might intervene in the matter.

2.2. While examining the question of return to the industry, the Tariff Commission was faced with practical difficulties in deciding on an appropriate principle for return. The Commission felt that the application of a uniform set of principles to all the units in the industry—whether based on capital employed, gross block or turnover—would be inequitable, especially when the stages of development of the different units were not similar. After analysing the past financial results of the automobile units, and also the need for evening out the future increases in costs, the Commission considered that the then existing prices were not excessive in the case of any model of car or truck, except diesel trucks produced by Premier Automobiles. On the other hand the price of the Ambassador car was lower than the ex-works cost. The Commission, after

studying the margin then currently recovered by the manufacturers over the ex-words costs, came to the conclusion that a margin upto 10 per cent. on the ex-works costs should not be considered excessive. Government also accepted the recommendations of the Commission.

2.3. The Tariff Commission had also examined the question of the remuneration to the distributor. On the basis of the Tariff Commission's recommendations, Government took certain decisions regarding what should be a fair return to the dealer.

2.4. Although initially the decision was to follow a fairly flexible policy regarding prices, as supplies began to fall short of demand the price control of Government became more strict. A close scrutiny was made of all proposed increase in prices and these were only allowed after Government were satisfied that there had been an actual increase in costs. Thus through the course of events rather than by deliberate intention what was indicated by the Tariff Commission as a yardstick for judging the fairness of remuneration to the industry and to the distributor has become the basis of price control. Today, therefore, the industry's profits are controlled. As, however, increases in costs have been taking place, prices to the consumer have been going up.

3. This arrangement has resulted neither in the satisfaction to the consumer nor in profits to the industry. One of the things which has struck us during the course of our enquiry is that Hindustan Motors who undoubtedly were the first to make substantial progress with the production of a passenger car in India had not declared any dividend to their ordinary shareholders throughout their existence except in the last financial year. The dividends declared by the other firms also have, in general, been modest. Whoever is making money in the automobile business today, the shoreholder in automobile companies does not seem to be one of them. We consider it legitimate that the price fixation policy should be such as to enable a reasonable return to be made to the investor in the automobile industry, provided the unit works efficiently and economically. It is an industry which does need large investment to be economic and successful, and when less important industries are making good profits the investment in the automobile industry deserves some incentives.

4.1. This does not mean that the investor is to benefit at the cost of the consumer. The important thing to ensure is that the return to the investor should depend upon his ability to keep service to the consumer. The cost-plus system as a basis of price fixation does just the opposite. For, it means that the higher the cost of production the greater the profits which the industry can earn. In our view, the cost-plus formula, while it may be useful in an emergency when certain things have to be produced regardless of cost and when a rough and ready method of giving a remuneration to the producer has to be found, should not be used as a basis for long-term price determination.

4.2. What are the possible alternatives? We have considered various possibilities but each of them suffers from certain drawbacks. The method of providing remuneration to the industry in the shape of a return on capital employed which has been found suitable in many

instances will not be very desirable for the reason that we want the ancillary industry to grow. A firm which gets its components produced by others should not suffer, merely because the capital employed by it is not so large. Then again, there are other problems. We see no reason why a firm whose vehicle has a high proportion of imported components should get a return which is similar to that of a firm which has replaced imported components by indigenous ones to a much greater extent.

4.3. On the whole we feel that prices can be more effectively controlled by increasing the availability of vehicles from the different factories in India and then giving the freedom to the consumer to purchase that vehicle which he considers to be the best value for money. To the extent, however, that for the present on account of shortages price control is considered necessary, fixation of prices should, in our view, be on an *ad hoc* basis and be influenced in particular by two considerations—

(a) an efficient producer who has succeeded in keeping his costs down should be able to make better profits than one whose costs are unreasonably high, and

(b) a firm which uses more indigenous components should get a better return than a firm which uses more imported components.

5.1. Before considering how this principle could be applied in practice, we turn to a consideration of the question whether price control should continue and if so, over what vehicles. There was in our view great force in the point put forward by the Tariff Commission that price control should not be introduced for a developing industry. The real difficulty is that in today's conditions of shortage there is a danger that without any control over prices the consumer might be exploited.

5.2. We have given a good deal of thought to the advantages and disadvantages of controlling prices. The main benefit to be derived from price control is the obvious one of benefiting the consumer. But it does not follow that by mere price control the consumer is in fact benefited. There is always the danger that when price is controlled, the industry may be selling at the official price but the consumer may still have to pay much more. We need not elaborate on the various possibilities that exist for this kind of circumvention. It is obvious however that if the benefit does not in fact go to the consumer then the effect of the price control would be to deprive the industry of internal resources, the shareholder of a return on his investment and exchequer of legitimate taxes.

5 3. There is today, so far as passenger cars are concerned, a Control Order in force. It is intended to ensure sales in order of registration and to prevent resales for a certain period of time. Government have thus taken certain steps to passenger cars to ensure that the benefit of lower prices does go to the consumer.

5.4. So far as commercial vehicles are concerned, the control in distribution does not apply and many malpractices exist. There are so-called financing houses which make high profits by lending money

to buyers of these vehicles at fancy rates of interest. The system of sales in order of registration although informally enforced does not prevent an unscrupulous person from buying a vehicle and re-selling it at a higher price. Lastly, and this in our view is the most important point, a commercial vehicle is not a consumer article. The person who buys it in turn operates the vehicle for profit. The ultimate consumer is therefore not the person who buys the vehicle but the person who pays for the use of its services. These payments are by and large not subject to any control, except that in respect of certain types of commercial vehicles, particularly those operated by State Transport Undertakings, there is a much closer link between the cost at which the vehicles are obtained and the charges made on account of the services for which these vehicles operate.

6.1. Having regard to the analysis made in the preceding paragraph, we recommend that—

(a) price control over cars should continue,

(b) price control over commercial vehicles should be abolished, and

(c) the price at which commercial vehicles are purchased by State Transport Undertakings and other similar agencies should be settled by entering into rate contracts with the producers of those vehicles.

6.2. What should be the prices fixed for cars? Government have not asked us to make specific recommendations regarding the prices of different vehicles. They have however at our request made available the services of their Chief Cost Accounts Officer and we have before us the report of the Chief Cost Accounts Officer. As is customary in Tariff Commission enquiries the report of the Cost Accounts Officer is being separately forwarded to Government for their confidential information. We have not discussed the figures of costs as determined in the cost examination with the industry. This is because firstly we were not called upon to recommend specific prices for the different vehicles and secondly because we ourselves consider it necessary to depart from the principle of determining prices on a cost-plus basis. If we went strictly on the past basis of price fixation there would be by and large an increase rather than decrease in the price of passenger car.

6.3. We are however firmly of the view that it is possible for the industry to readjust its position in order to sell vehicles at a lower price than is prevalent today. Such a readjustment will no doubt take a little time, but we consider that unless pressure is exercised towards this end from now on there will be no improvement in the position. We have earlier in the Report indicated that products of the ancillary industry need not be procured at the present very high prices and have made certain recommendations to avoid this. We have also taken the view that prices of commercial vehicles need not be controlled and this will enable two of the passenger car producers, namely Hindustan Motors and Premiers, to make necessary internal adjustments to absorb the cut in price which we are proposing. At the same time it is important, and indeed crucial. that with the cuts in prices which we are proposing the industry should be enabled to produce full-blast and

uncertainties and delays in import licensing particularly of raw materials like steel should not dislocate production at the maximum level.

6.4. We therefore recommend that Government should immediately ask the producers of passenger cars to put in their import applications for all their requirements of raw materials and components for a period of one year. Four months after the date on which the necessary import licences have been issued the price of Hindustan Ambassador and the Fiat-1100 should be reduced by Rs. 500. A period of four months is in our view not only reasonable but necessary to enable adjustments to be made and for a steady flow of components and raw materials to be assured. Indeed in the case of steel, with the shortages that have developed in international markets, even a four months' period might still be too short. On the whole however we consider that four months would be a reasonable period for this purpose.

6.5. Standard Motors do not have a truck programme which would help them to absorb any losses on cars in the period of adjustment. We have however come to the conclusion that the Standard-10 programme is never likely to be economic or successful, particularly with the introduction of a new economy car. We have therefore recommended that Standards instead should go back to the production of the Vanguard with which they had started. If this recommendation is agreed to by Standard Motors—as we have reason to believe that it would be—and is accepted by Government then the new import licences to be given to Standard Motors would be for the Vanguard. We consider that in all the circumstances of the case it would be appropriate to make a cut of Rs. 400/- in the price of the smaller Standard car from the same date, namely four months after the issue of import licences and to allow the Vanguard to sell without price control for the first three months. Thereafter a new price for the Vanguard exclusive of customs duty for actual imports other than raw materials and of excise duties on tyres, tubes and batteries, should be fixed which in our view should not be more than 40 per cent higher than the basic price exclusive of purchase tax of the built-up Vanguard in the United Kingdom. In other words, in developing the manufacture of the Vanguard in India Standard Motors should be subject to the discipline that they must so arrange their affairs that Indian costs apart from the incidence of excise duties on tyres, batteries, etc. do not exceed overseas cost by more than the figure which would permit them to sell the vehicle within the price range indicated above.

7.1. The cuts in prices which we have recommended above are cuts in consumer prices. As stated above, price control today is operated on two planes—the price at which the factory supplies the vehicle to the dealer and the addition which the dealer makes to this price in order to arrive at the final consumer price.

7.2. We have heard many arguments as to whether or not the margin thus provided to the dealer is reasonable. On the one hand, it has been put to us that it is too high considering that actual service to the consumer today is at a low ebb. On the other hand it has been argued that considering the high cost of providing these services the remuneration to the dealer is inadequate We feel on the whole that the assessment made by the Tariff Commission in this respect was a fair one and there is no reason to advise a different figure. In our view

however there is no reason why Government should prescribe a particular figure of remuneration to the dealer. We are of the view that the price fixed for the vehicle should be the consumer price by which we mean the price at which the consumer could buy the vehicle with only such additions as result from the imposition of sales-taxes and actual transport expenses from the factory to the point of sale. Accordingly we recommend that henceforth the price fixation should be inclusive of the margin to be allowed to the dealer, the actual amount being not subject to determination by Government.

7.3. The cuts we have recommended above therefore apply to the present consumer prices at which dealers are expected to sell the vehicle. These prices all inclusive of spare tyres and standard tool kits would, if our recommendations are accepted, become Rs. 11,054/- for the Ambassador, Rs. 9,283/- for Fiat 1100 and Rs. 9,516/- for the Standard-10, with effect from the 1st August 1960 assuming that the necessary import licences have been issued by the 1st March 1960. A similar reduction will apply to station wagons, traveller cars etc.

8.1. Turning to commercial vehicles, by recommending de-control of prices we are not suggesting that producers should in fact raise prices. Prices for commercial vehicles should also come down. We note with satisfaction that TELCOS have in this matter behaved with a great sense of social responsibility by not adding the increase in excise duties on tyres to their truck prices and later by making a voluntary reduction in their selling prices. The other makers of commercial vehicles also should and would, in our view, if they are to survive in the kind of competitive conditions which we are envisaging, follow a policy of reducing their prices. The production of commercial vehicles in India does not suffer from the same disadvantages as the production of passenger cars The demand for these vehicles is high and increasing. The output in the Indian factories therefore would not be so much less in comparison with the output in similar factories abroad to justify the plea that in India these vehicles must cost more. We are of the view that by the end of 1961 it should be possible for commercial vehicles produced in India to sell to the consumer at prices which are not appreciably higher than prices for similar vehicles abroad. We would like the industry to strive towards this end. The lifting of price control in the interim period should be regarded as an opportunity to the industry to readjust its internal position and to increase where necessary investment in plant and machinery and above all in man-power and to cut down costs. Units which do not take such steps will in our view come to grief when the sellers' market disappears.

8.2. Even in the interim period the fixation of suitable prices at which these vehicles will be purchased by Government will provide some kind of a yardstick for judging the extent to which different units are playing fair to the consumer. The price which Government secures by way of a rate contract would of course be lower than the price at which retail sales are made. One of the reasons for this is that State Transport undertakings do not rely on services performed by dealers and manufacturers to the same extent that other consumers do. Nevertheless, the purchase price of Government will have a healthy effect on the market. Indeed this may well have a more beneficial effect than the fixation of ceiling prices which tend to become

floor prices. The fact that a particular price has been fixed by Government gives a certain backing to the price which under ordinary competitive conditions may not be there.

9.1. We have discussed the question of prices for passenger cars and commercial vehicles above. We now turn to Jeeps. Since the jeep in India has no other competitor, it will in our view be justifiable to retain control over prices The main buyer of course is the Government and anyhow prices so far as Government are concerned are settled by negotiation. For the rest of the buyers who normally buy jeeps for essential purposes and not for plying them for hire, protection in the shape of price control would be justified.

9.2. The manufacture of jeep in India, as we have had occasion to point out earlier in the report, has been organised on reasonably economic lines. A lot of components are purchased from the ancillary industry and the prices paid are the lowest. While we are inclined to ensure a reduction in the price of jeeps as in the case of passenger cars the order of reduction which we are inclined to recommend cannot, however, be the same as for passenger cars. On the whole, we recommend that the selling price of the jeep should be reduced by Rs. 200/-. Again we are talking of the consumer price inclusive of dealers' commission. In the case of the jeep, the supply of components has not been a bottleneck because against DLF credit imports to components have been permitted to the full extent asked for. This is another reason why they cannot effect economies in costs by increasing their output as we expect the other car producers to achieve. On the other hand, for this very reason we do not see any reason why the reduction in the price should be delayed. In other words, in their case the price cut can be made straightaway without waiting for a period of four months from the date of issue of necessary import licences for one year's production which we have recommended in the case of passenger cars.

9.3. The recommendation made above applies to the jeep proper and the jeep station wagon. In any commercial vehicles in the shape of 1-ton trucks are marketed by Mahindra & Mahindra no price control need apply to them.

10 1. Finally there is the case of the diesel engines. We have considered whether it would be reasonable and desirable to control prices of engines when we have recommended decontrol of the price of the vehicles. We have come to the conclusion that there are some good reasons why the control over the price of the engines should not be lifted. These are:

(a) While we are recommending the decontrol of commercial vehicle prices, it is our intention and expectation that prices will remain stable and then go down and we do not wish an upward swing to prices to be given.

(b) The suppliers of the engines *vis-a-vis* the manufacturers of the vehicles are in the same quasi-monopolistic position as the jeep is.

(c) Government are compelling the manufacturers of chassis to buy Indian engines even though they could be imported cheaper after paying duty in full.

(d) Permission has been refused to the chassis manufacturers to produce their own engines.

10.2. As regards the actual level of prices for engines, we would consider a cut of Rs. 150/- on the prevailing prices to be justified. This cut should of course apply to sales to vehicle manufacturers alone Sales in the replacement market need not be controlled.

11. We would like to emphasise that it is our firm view that both cars and trucks in India could be and should be sold at cheaper prices. In our judgment, there is no reason why trucks need be more expensive in India than they are abroad. For passenger cars there is some reason to expect prices in India to be a little higher, but on the whole the increase in price on account of the manufacture of cars in India need not be more than 50 per cent above the overseas price. Once this target has been reached, the consumer in India will at least feel that the car from an Indian factory is not more expensive than a similar car imported from overseas. We are not suggesting that the cost structure of the Indian industry today is such as to enable sales to be made at these prices. We have also emphasised that for a reduction in prices not only the automobile industry proper, but various other agencies have to contribute. Therefore, for the present we have been content to make what we ourselves regard as interim recommendations regarding prices and we would hope that by the end of 1961 more substantial reductions will be possible.

CHAPTER XI

CONCLUDING REMARKS

1. Our enquiry has been confined to the automobile industry. We have tried not to go outside our field into the sphere of the road transport industry.

2. We do feel however that the development of the road transport industry has an important bearing on the automobile industry. The pursuit of well-coordinated policies by the different States, particularly uniformity on an all-India basis in fixing the Registered Laden Weights of vehicles, will be of great value. Then again we have not in the report discussed trailers because at present the area in which they could be used is extremely limited. If on the more important roadways where the load is heavy the use of trailers could be established, the community as a whole would stand to gain. The questions referred to another Committee under the chairmanship of Shri K. C. Neogy will also have an important bearing on the future development of the automobile industry. We hope that what we have stated in our report will be of some use to this Committee.

3. The automobile industry in India in its early years passed through difficult times. Not only was the volume of demand low, but the picture of future development was so uncertain that investment was made in various programmes of development, which later proved to be infructuous. We would in this category include the attempts made earlier to manufacture American types of car and petrol-driven 3-ton commercial trucks in the country. The industry has now turned the corner. It has the opportunity, and indeed the obligation, to become efficient and economic and to create the kind of consumer goodwill without which no industry, however well-protected, can survive.

4. Even during the course of our enquiry which has lasted longer than we originally expected, changes have been taking place and it gives us great satisfaction to refer to some of these as we bring our report to a close.

5. During 1959, Government have been liberal in regard to allocations of foreign exchange to the industry, both for components and raw materials and also for capital goods. The industry also has been doing its best to increase production and by the end of 1959 the increase in production has been really significant. The production of cars, trucks and jeeps in December 1959 was 1621, 2083 and 632 Nos. respectively. This is well above the monthly averages of the years 1957, 1958 and 1959, which are set out below:—

	1957	1958	1959
	Nos.	Nos.	Nos.
Cars	1,014	676	1,000
Jeeps	325	343	448
Commercial vehicles	1,305	1,117	1,591

6. In regard to prices too there has been one happy development. One manufacturer of commercial vehicles has reduced the price of its vehicles by a little over Rs. 400 each without any pressure from Government. This is indicative of the fact that costs can be reduced if a manufacturing programme is implemented with adequate technical control. In the case of another manufacturer, the per cent. increase in the price of the vehicle during the period 1954—59 was less than the corresponding per cent. increase in the overseas price, although during the same period the indigenous content of the vehicle was increased to 65 per cent. We trust other manufacturers will as much in their own interest as in the interests of the consumer follow the policy of lowering prices as costs go down.

7. In the ancillary industry too costs have come down in the case of fuel injection equipment (nozzles and nozzle holders) and leaf springs. Many important new schemes have been approved by Government in the last few months while the Committee has been at work.

8. On the whole, at the end of our labours we feel very much more confident about future development than we were when we began.

CHAPTER XII

CONCLUSIONS AND RECOMMENDATIONS

1. The recommendations made in the report have not been discussed with the industry and it would be desirable to ascertain the reactions and comments of the industry before taking final decisions on them.

(*Chapter I, para.* 6.2).

2. The decision to grant protection to the industry was sound. The achievement of self-sufficiency regarding transport vehicles is of great importance to the economy. Even in regard to passenger cars the consumer would have been far worse off if in the present difficulties regarding foreign exchange there had been no domestic industry.

(*Chapter II, paras.* 4 *to* 6).

3. The demand for vehicles today has gone up considerably. There is need for greater competition though the shortage of foreign exchange operates as a limiting factor.

(*Chapter II, para.* 7).

4. Among the various possible alternatives to measure the progress of indigenous manufacture the best would be to take the ex-factory price of the complete vehicle in the country of origin and to deduct from it the percentage of value represented by components, either finished or semi-finished, which are still imported.

The indigenous content in different vehicles and engines worked on the basis of import licensing figures for the period October 1959 to March 1960 is set out in para. 2.4 of Chapter III.

To encourage the development of ancillary industries and to give inducement to the automobile manufacturers to buy components from outside, in measuring the progress of different automobile units, no distinction should be made between units, who make more of the components required by them and units who buy more of such components from the ancillary industry.

(*Chapter III, paras.* 2.1 *to* 2.5).

5. While it has not been possible to compare the progress of each firm with its promise for reasons indicated in para. 3.1 of Chapter III, a study of each programme and its fulfilment has been attempted.

6. Among cars, the Ambassador continues to be leader from the point of view of indigenous manufacture. In 1950-51 the important components of the engine, transmission and axle were made by Hindustan Motors. At the time of the first Tariff Commission Enquiry in 1953 the indigenous content was about 45 per cent. which

has gone up to 50 per cent. by the time of the second Tariff Commission Enquiry in 1956. Today it is a little above 70 per cent.

(Chapter III, para. 3.3).

7. Premier Automobiles are very much behind schedule in their Fiat 1100 programme. When their scheme was approved in November 1953, the aim was completion of the manufacture of engine, axles and transmission by the end of 1956. At the time of second Tariff Commission Enquiry in 1956, apart from tyre, tube, batteries, etc., which were bought out from other industries, the items which Premier Automobiles were making were the fuel tank, silencer assembly, and the radiator for a limited number of vehicles. The indigenous content today is about 47 per cent.

(Chapter III, para. 3.4)

8. The progress of Standard Motors has been the lowest among the car manufacturers. Standard Vanguard was approved in September 1953 and Standard 10 in October 1954. In both cases the programme aimed at the completion of the manufacture of engine, transmission and axles by the end of 1956. At the time of the second Tariff Commission Enquiry in 1956, they had made a few components for Vanguard but had made little progress with Standard 10. The indigenous content of Standard 10 today is about 32·5 per cent. while their production of Vanguard has been discontinued.

(Chapter III, para. 3.5).

9. Mahindra and Mahindra had got their programme for Jeep approved in June 1954 with the aim of completing the manufacture of engine, axles, and transmission by the end of 1958. At the time of the second Tariff Commission Enquiry in 1956 they had made little progress. Today the vehicle is 65 per cent. indigenous.

(Chapter III, para. 3.6).

10. The Dodge truck of Premier Automobiles had a few indigenous items even in 1950-51. Their approved programme in 1953 aimed at the completion of manufacture of engine, transmission, and axles by the end of 1956. At the time of the second Tariff Commission Enquiry in 1956, the important components of the engine and gear box were completed, but the axle had yet to be developed. Meanwhile the consumer demand had gone over to diesel. Today their indigenous content is 68 per cent., taking into account the diesel engines supplied to them by other manufacturers.

(Chapter III, para. 3.7).

11. The performance of Telcos on Tata-Benz trucks has been equal to their promise. The scheme was approved in 1954 with a manufacturing programme which aimed at the engine, transmission, gear box and axles being made indigenously by the end of 1959. They had made little progress at the time of the second Tariff Commission Enquiry, but today the indigenous content is 64 per cent. and 71 per cent. on the truck and bus chassis respectively.

(Chapter III, para. 3.8).

12. The Leyland Comet of Ashok-Leyland was approved in 1954 with a programme to make the important components by the end of 1959. Today their indigenous content is 38·5 per cent. Part of the delay was to complete reorganisation of the company's capital structure causing a major dislocation of their programme.

(*Chapter III, para.* 3.9).

13. Bedford trucks were taken by Hindustan Motors only in 1958 in place of their abandoned Studebaker programme and they have lost no time in going ahead to place orders for the equipment needed for their programme.

(*Chapter III, para.* 3.10).

14. There are certain items going into the vehicle, the production of which in India will entail heavy expenditure of foreign exchange for a nominal reduction in imports and whose cost of production will also be too high and impose a wholly unjustifiable burden on the consumer. Such uneconomic investment could be justified in an industry of strategic value but not in the case of passenger cars.

(*Chapter III, para.* 5.2).

15. To consider the extent to which the price of vehicles in India is higher than in overseas countries, the comparison should be between the basic price of the same vehicle in India and abroad and not of different vehicles, and the incidence of taxation should be eliminated. A comparison on this basis of Ambassador car and Tata-Benz truck prices in India and in their respective countries of origin is made in paras. 2.2 and 2.3 of Chapter IV, from which it appears that the consumer price of these two vehicles is 38 per cent. and 6 per cent. respectively higher in India.

16. The net value of the production within the automobile factory itself, which indicates the extent to which the cost of the automobile is directly the responsibility of the automobile manufacturer, is set out in paras. 3.3 and 3.4 of Chapter IV. The percentage of the total cost of a vehicle in the hands of the automobile manufacturer himself is small and generally less than one third of the total cost of the vehicle. For the Hindustan Ambassador car the total cost of raw materials and components purchased from outside is a little more than the price of the built up car in the U.K.

(*Chapter IV, paras.* 3.3, 3.4).

17. The difficulties and handicaps which have been partly responsible for costs in Indian factories high are set out in paras. 4.2, 4.3, and 4.4 of Chapter IV.

18. The disparity between Indian costs and overseas purchase price is capable of considerable reduction by proper supervision and control.

(*Chapter IV, para* 6·1).

19. The recommendations of Tariff Commission regarding the introduction of proper training schemes have been disregarded by all the manufacturers except Telco.

(*Chapter IV, para* 6·2).

20. Enough attention is not being paid to technical supervision by some units.

(*Chapter IV, para* 6·3).

21. The recommendations of Tariff Commission regarding the introduction of proper cost accounting have been disregarded by the manufacturers with the exception of Simpsons, who make Perkins Engines. The cost data available for examination were open to serious criticism and objection. The Government should instruct the industry to introduce an adequate system of cost accounting.

(*Chapter IV, paras.* 7·1, 7·2, 7·3).

22. The lack of cost consciousness on the part of industry is due to many reasons which are set out in paras 8·1, 8·2, 8·3, 8·4 of Chapter IV.

23. Though there had been since 1956 considerable improvement in the quality of automobiles made in India, sufficient care is not being taken to avoid minor but irritating defects creeping in at the assembly stage.

(*Chapter IV, paras.* 9·2, 9·3).

24. It would be desirable to set up an institution for the testing of the vehicles.

(*Chapter IV, para.* 9·4).

25. The progress made by the ancillary industry is substantial and the part played by it in increasing the indigenous content of vehicles is significant.

(*Chapter V, paras.* 3·2, 3·4).

26. A study of the prices at which components are being supplied by the ancillary industry reveals:—

(a) That in general the increase in domestic price over the price of the imported components is very much higher in respect of items supplied by ancillary industry than for items produced by the main automobile manufacturers.

(*Chapter V, para.* 4·3).

(b) But some producers are able to buy their components from the ancillary industry at prices which are competitive and even cheaper than the prices of the imported components, while others have a different tale to tell.

(*Chapter V, para.* 4·4)

27. Measures which are necessary to impose a stricter discipline both on the ancillary producer and on the main producer in order to bring down the cost of production of the vehicle and at the same time to help the ancillary industries are set out in para. 5 of Chapter V.

28. When any kind of special relationship exists between the ancillary industry and the main producer, the prices charged by the former to the latter should be subject to close scrutiny.

29. In Indian conditions, it would be desirable, if even some of the major items, not generally considered to be the responsibility of the ancillary industry, were developed by the automobile manufacturers themselves on a co-operative basis. If such a venture does not materialise, it would be advisable for the Government to take the initiative in the matter.

(*Chapter V, paras.* 6.1, 6.2, 6.3, 6.4).

30. Commercial transport vehicles should be looked upon as capital goods of the road transport industry. With similar expenditure of foreign exchange few other industries can stimulate such widespread employment with benefit both to the consumer and producer.

(*Chapter VI, para.* 3).

31. Since in the long run the maintenance cost of the vehicle assumes greater importance than the initial price, increased availability of spares and servicing tools should be ensured even if it is at some sacrifice of increased production of vehicles.

(*Chapter VI, para.* 4·1).

32. To ensure that the consumer gets the spare parts at a reasonable price, import applications from:—

(a) small fleet owners, who have organised themselves on a co-operative basis, and

(b) Automobile Associations, who are prepared to bulk the requirements of the spare parts required by their members, particularly for vehicles not in popular use,

may be considered sympathetically.

(*Chapter VI, para.* 4.3).

33. After the serious difficulties in regard to foreign exchange, which developed in 1957, the higher priorty given by Government for importing components of commercial vehicles in preference to the components of cars was legitimate. However, the priority between capital goods and components needs consideration.

(*Chapter VI, paras.* 5.2, 5.3, 5.4).

34. To prevent avoidable duplication of capacity and to rationalise and reduce to the minimum the expenditure of foreign exchange,

the Government should ask the automobile manufacturers and ancillary industry to apply for all capital goods they wish to import in order to complete their manufacturing programme by the end of 1961.

(*Chapter VI, para.* 5.5).

35. Taxation on diesel oil will not be the answer to the growing imbalance between diesel and petrol. If taxation is to be used as an instrument, the imposition of an excise duty on diesel engines for road transport coupled with a reduction in the level of taxation on petrol and greater availability of transport vehicles fitted with petrol engines would be the best approach to the problem.

(*Chapter VI, paras.* 6.2, 6.3).

36. One way in which the consumption of diesel in heavier road transport vehicles can be reduced and the consumption of petrol can be increased would be by marketing a mixture of diesel and petrol. A suitable programme for the introduction of mixed fuel should be taken in hand so that facilities for handling the mixed fuel could develop as a substitute for and not as an addition to the facilities for handling pure diesel.

(*Chapter VI, paras.* 6.4, 6.5).

37. Since a sudden change in the economics of diesel operation will impose a loss on the community and render some of the investment already made both in rupees and in foreign exchange infructuous, Government should take a clear-cut decision of policy on this subject at the earliest possible date.

(*Chapter V, para.* 6.5).

38. The foreign exchange requirements of any new production programme of automobiles must rank in priority below the requirements for the maintenance of existing vehicles and completion of the existing production programmes. For new capacity expenditure on foreign exchange should be limited to capital goods for the project and import of components as a recurring feature should be virtually eliminated.

(*Chapter V, para.* 7.2).

39. Various estimates of future demand have been referred to and the factors which make the problem of assessing future demand difficult are set out in paras. 2.1, 2.2, 2.3, 2.4, 2.5 of Chapter VII.

40. The conditions which necessitated the limitation of the area of internal competition to give each manufacturing unit a certain assured share of the market when demand was low no longer exist. The demand for 3 to 5 ton diesel vehicles is in excess of the total production capacity of the three units concerned, namely, Telco, Hindustan Motors and Premiers. These units should, therefore, be permitted to produce and sell as many vehicles as they can.

(*Chapter VII, paras.* 4.1, 4.2).

41 The demand for heavier vehicles of the Leyland Comet class is too small to introduce competition in this range at present but makers of medium vehicles should be allowed to market them with such variation as would enable them to carry heavier loads so long as the basic features of the vehicles are not altered and extra imports are not asked for.

(*Chapter VII, paras.* 5.1 *and* 5.2).

42. For future development, the manufacturing units should order such plant and machinery as they may need to complete their programme at the very beginning. Once all orders have been placed the import of components for part assembly and part manufacture can be regulated according to availability of foreign exchange and the demand.

(*Chapter VII, para.* 6).

43. The target of capacity for commercial vehicles should be fixed at 60,000 Nos. for the third Five Year Plan period. The consumers interests will be better served if the expansion to achieve the target of capacity is allowed on the basis of each firm's ability to compete with the others in terms of cost, quality and servicing, rather than on any abstract considerations of equity as between the different firms concerned.

(*Chapter VII, para.* 8.1)

44. There are at present two makers of chassis of vehicles who buy diesel engines from two independent manufacturers of engines in the country. The progress made by the engine manufacturers and the directions of future development—whether the chassis manufacturers should be allowed to produce their own engines—are discussed in paras 8.5, 8.6 and 8.7 of Chapter VII.

45. The factors to be taken into account in considering the proposals for expansion for commercial vehicles are set out in para. 9 of Chapter VII.

46. Demand for Leyland Tiger/Titan is limited. Increase in indigenous content is therefore likely to be accompanied by a marked increase in cost. For the present Ashok Leyland should concentrate on the engine which has many uses for industrial purposes and for such components as can be developed with the equipment installed for the Comet. State Governments who need such vehicles may be allowed to import such components as cannot be supplied by Ashok Leyland or ancillary industries.

(*Chapter VII, para.* 10.1).

47. Light commercial vehicles have an important role to play. However, their demand would not justify setting up independent production. Where any firms have developed petrol engines for other purposes they should be permitted to market delivery vans and commercial vehicles using the same engines.

(*Chapter VII, para.* 10.2).

48. The target of capacity for cars for the existing units should be fixed at 30,000 Nos. for the third Five Year Plan period. If a cheap car is introduced the demand of the existing cars is likely to go down to some extent but there will also be an overall increase in demand to 40,000 Nos. through the creation of a new class of consumers.

(*Chapter VII, para.* 12)

49. The target of capacity for jeeps should be fixed at 10,000 Nos. for the third Five Year Plan period. This demand is not adequate to be shared by another unit. The price of the jeep should, however, come down with an increase in production. If this is not assured consideration may be given to licensing another unit.

(*Chapter VII, para.* 13).

50. In a planned and controlled economy such as exists in India capacity should not be created either in the public or private sector unless that capacity is needed by economy as a whole. This should be the criterion to decide as to whether it would or would not be desirable for the public sector to take on the production of automobiles for the people as distinct from production in Ordnance Factories to meet Defence needs.

(*Chapter VII, para.* 14).

51. The reasons advanced at the public hearings in favour of and against the introduction of a new car are given in paras. 1 and 2 of Chapter VIII.

52. Two alternatives are possible to meet the consumers' need for a car at more economic price, *viz.*, by improving the quality, quantity and cheapness of the cars already on the manufacturing programme or by introducing a new vehicle altogether. Considerations on which the introduction of a new car is recommended are given in para. 4 of Chapter VIII.

53. The measures which should be taken firstly, to ensure that the production of the new car is economic and secondly, to ensure that damage to the existing industry is minimised are indicated in para. 5 of Chapter VIII.

54. The foreign exchange implications of a small car programme are indicated in para. 6 of Chapter VIII.

55. From among the many proposals received from different firms and interests, no specific recommendation in favour of a particular vehicle is made for reasons indicated in para. 7 of Chapter VIII.

56. The main considerations which should govern the choice of the car to be produced in India are set out in para. 8 of Chapter VIII.

57. The considerations which should govern the choice of the agency which should be employed for the manufacture of an economic car is given in para. 9 of Chapter VIII.

58. The type of vehicle known commonly as the 'Miniature' or 'Bubble car' would not be suitable for Indian road conditions, size of family and climatic conditions, etc. Their development should be considered in the context of expansion of capacity sanctioned for making scooters, motor cycles and other two wheeled and three wheeled vehicles. Among the proposals relating to miniature cars, that of Bachraj Trading Corporation, can be developed with a relatively lower expenditure of foreign exchange because of the large commonality of components between the proposed vehicle and the three wheeler for which the firm has already been licensed to manufacture.

(*Chapter VIII, para.* 11).

59. Among the 24 applications for the manufacture of baby car only five applications merit consideration. These are set out in para. 12 of Chapter VIII.

60. The car proposed to be manufactured by Hindustan Aircraft Ltd. is still in the development stage and has yet to be perfected and brought into regular production. It would, therefore, be premature to consider this proposal as an answer to the question put to the Committee.

(*Chapter VIII, para.* 13.1).

61. Brief resume of main features of the five schemes are given in para 13 of Chapter VIII. The considerations which should be taken into account in making the final selection are set out in para. 11.3 of Chapter VII.

62. For long distance journeys and for special purposes there is demand for bigger cars of the American type which is not large enough to sustain their manufacture in India. Premier Automobiles who assemble Dodge cars and supply some components including the engine of their own manufacture may be permitted to import components for assembly as and when considered desirable to meet the demand for this type of cars.

(*Chapter VII, para.* 11.5).

63. There is no room for a cheap car in addition to the Baby Hindustan; it is for Government to consider whether there is any commitment to permit Hindustan Motors to manufacture Baby Hindustan by virtue of the fact that initially a programme of manufacture had been approved many years ago.

(*Chapter VII, para.* 11.4).

64. There is widespread need for a medium car of the Standard Vanguard type. At the time of suspension of its manufacturing programme, Standard Motors had made better progress with this car than with Standard 10. Standard Motors are not equipped to produce Standard 10 in large numbers; moreover, this car undergoes frequent changes of design in the U.K. Therefore, Standard Motors should gradually give up Standard 10 in favour of Vanguard. They should also be permitted to market a light petrol delivery van using

the same engine, axle and transmission as their Vanguard car. The 10 H.P. engine which they have already developed should also be put to similar use if they so desire.

(*Chapter VII, paras.* 11.6 11.9).

65. The best production pattern for passenger cars would be the new economy car, the Fiat 1100, the Hindustan Ambassador and the Standard Vanguard. The Dodge may continue on an *ad hoc* basis.

(*Chapter VII, para.* 11.7).

66. It is not necessary to earmark or allocate particular figures of production to those vehicles which should be decided by consumers choice and the size of the market.

(*Chapter VII, para.* 11.8.).

67. The existing production capacity of the automobile industry as assessed by the Technical Committee is:

Cars	20,000
Commercial Vehicles . .	28,000
Jeep and Jeep Station Wagons .	5,500
Petrol engines	3,000

(*Chapter IX, para.* 1.2).

68. The total investment required for the Commercial vehicles on the target for the third Five Year Plan is Rs. 67 crores on plant and machinery and Rs. 19.5 crores in buildings and land.

(*Chapter IX,* para. 2.5).

69. The likely investment to be made by the end of the second Five Year Plan in commercial vehicles and Jeep would be Rs. 21 crores in plant and machinery and Rs. 6 crores in land and buildings. The additional investment for the third Plan Period would be Rs. 46 crores in plant and machinery and Rs. 13.5 crores in land and buildings.

(*Chapter IX, para.* 2.6).

70. The total investment required for cars on the target of the third Five Year Plan would be Rs. 20 crores in plant and machinery and Rs. 4 crores in land and buildings. The likely investment at the end of the second Five Year Plan would be Rs. 13.5 crores in plant and machinery and Rs. 2.5 crores in land and buildings. The additional investment required for the third Five Year Plan period would be Rs. 6.5 crores in plant and machinery and Rs. 1.5 crores in land and buildings.

(*Chapter IX, para.* 4.3).

71. Any measure of taxation which would raise the cost of the indigenous vehicles further at a time when there is general anxiety to see lower prices would not be advisable.

(*Chapter IX, para.* 6.1).

72. Government might consider fixing a uniform rate of duty on all automobile components.

(*Chapter IX, para* 6.2).

73. Government might consider fixing flat rates of import duty on built-up commercial vehicles and built-up automotive engines at a level higher than the average import duty on components imported as components.

(*Chapter IX, para* 6.3).

74. There is much to be gained by making the duty which applies to most components applicable to all components. To offset the increase in the cost of vehicles arising out of the arrangement, the excise duties on tyre, tube and batteries used as original equipment should be waived .

(*Chapter IX, paras* 7.2, 7.3).

75. It might be advantageous to keep on increasing the import duty on components from year to year since it would help these firms which move ahead with their manufacturing programme to retain a competitive advantage.

(*Chapter IX, para.* 7.4).

76. The taxation policy applicable to the automobile industry should be influenced by long term rather than short term considerations. It would be as much in the interests of revenues as of the development of the automobile industry if the taxation policy was such as to keep the level of taxation per vehicle, as it leaves the factory somewhat low so as to stimulate the demand for vehicles to as high a level as the industry can cope with.

(*Chapter IX, para* 8.1).

77. The automobile industry needs large investment to be economic and successful. Therefore the price fixation policy should be such as to ensure a reasonable return to the investor in the automobile industry provided the unit works efficiently and economically.

(*Chapter X, para* 3).

78. The cost-plus system should not be used as a basis for long term price determination.

(*Chapter X, para* 4.1).

79. Prices can be more effectively controlled by increasing the production of different factories and giving the consumer the freedom to buy the vehicle on a competitive basis; until such conditions are created, some measure of price control may be necessary.

(*Chapter X, paras* 4.2, 4.3).

80. Since Government have taken certain steps through a Control Order in regard to passenger cars to ensure that the benefit of the lower prices go to the consumer the price control over cars should continue.

(*Chapter X, paras* 5.3, 6.1)

81. Since the ultimate consumer of the commercial vehicle is often not the person who buys the vehicle, but the person who pays for the use of its services which payment by and large is not subject to any control, price control over commercial vehicles should be abolished. The price at which commercial vehicles are purchased by State Transport Undertakings and other similar agencies should be settled by mutual negotiations.

(*Chapter X, paras.* 5.4, 6.1).

82. The decontrol on commercial vehicles should enable both Hindustan Motors and Premier Automobiles to make internal adjustments to absorb a reduction in the prices of Ambassador and Fiat 1100 respectively provided production is permitted to be maintained at the maximum level. After giving the necessary import licences for raw materials and components and providing 4 months to enable adjustments to be made and to ensure steady flow of raw materials, the current prices of Fiat 1100 and Hindustan Ambassador should be reduced as below:—

	Current	Proposed	Reduction
	Rs.	Rs.	Rs.
Fiat 1100	9,783	9,283	500
Hindustan Ambassador	11,554	11,054	500

(*Chapter X, paras.* 6.3, 6.4).

83. Standard 10 programme is never likely to be economic or successful particularly with the introduction of a new economy car and should therefore be given up by Standard Motors in favour of Standard Vanguard. New import licences should be for the Vanguard only.

(*Chapter X, para.* 6.5).

84. The new Vanguard should be allowed to sell without price control for the first three months. Thereafter the new price for the Vanguard exclusive of Customs duty for actual imports other than raw material and of excise duties on tyres, tube and battery should not be more than 40 per cent. higher than the basic price exclusive of purchase tax of the built up Vanguard in U.K.

(*Chapter X, para.* 6.5).

85. Four months from the date of issue of import licences for the Vanguard the price of Standard 10 should be reduced by Rs. 400.

(*Chapter X, paras.* 6.1, 7.3).

86. The price fixation in all cases should be inclusive of dealer's commission, the actual amount being not subject to determination by Government.

(*Chapter X, para.* 7.3).

87. Since Jeep has no other competitor, it would be justifiable to retain control over prices. The current selling price of Jeep and Station Wagon should be reduced by Rs. 200 each straightaway. The

new price of Jeep and Station Wagon would then become Rs. 12,421 and Rs. 18,422 respectively.

(*Chapter X, paras.* 9.1, 9.2, 9.3).

88. The arguments in favour of price control over automotive diesel engines are set out in para 10.1 of Chapter X.

89. The prices of engines sold to vehicle manufacturers as original fitment should be reduced by Rs. 150. Sales in the replacement market need not be controlled.

(*Chapter X, para.* 10.2).

90. Attention is also drawn to the following important recommendations:--

(a) The industry should be enabled to place orders for its requirements of steel more than 12 months ahead to ensure timely supplies at the best possible prices.

(*Chapter IV, para.* 4.5).

(b) The rate of progress has been slowed down by difficulties of foreign exchange though most manufacturers should have ordered all their plants and machinery in accordance with their approved programmes of manufacture even before the restrictions on import of capital goods were imposed. The inadequacy of rupee finance and technical competence has been a greater obstacle to progress than shortage of foreign exchange.

(*Chapter III, para.* 3.1).

(c) The road transport industry has an important bearing on the automobile industry. The pursuit of well coordinated policies by the different States, particularly uniformity on an all-India basis in fixing the Registered Laden Weights of vehicles will be of great value.

(*Chapter XI, para.* 2).

ACKNOWLEDGEMENT

91. Before we conclude, we wish to acknowledge the great deal of valuable assistance, which the Committee has received in its work from Shri N. Krishnan, Chief Cost Accounts Officer to the Government of India and from Lieut. Col. V. P. S. Menon, the Secretary of this Committee. The data supplied by them as well as their contribution to our discussions have been of the greatest value to the Committee and we take this opportunity of placing on record our appreciation of their services. Our thanks are also due to the representatives of the industry, various associations and individuals, who have co-operated with us in carrying out the enquiry and have helped us with their comments, suggestions and complaints.

V. P. S. MENON,
Secretary

NEW DELHI;
Dated 25th January, 1960.

L. K. JHA,
Chairman

RR. ADM. DAYA SHANKER,
Member

V. K. R. MENON,
Member

S. K. MURANJAN,
Member

B. D. KALELKAR,
Member

B. N. DAS GUPTA,
Member

M. M. GUPTA,
Member

D. D. SURI,
Member

ANNEXURE I

MINUTE OF DISSENT OF SRI B. N. DAS GUPTA

I regret having to write this minute of dissent. The reason is obvious. As an academician, I cannot divest myself of the responsibilities that the Plans enjoin upon us. Secondly, I happen to be somewhat acquainted with the different phases of the automobile industry ever since 1952 when as a Member of the Tariff Commission, Government of India, we took up the investigation into this industry. I knew well which manufacturing units responded to the expectations of the Government of India and at what cost and also which units continued with slow progress and large imports, contrary to Government expectations and phased programme, and as a result enjoyed financial gains. My official position brought me in touch with the difficulties and hurdles that the pioneers of this industry experienced. I, therefore, cannot look upon the present investigation except in the background of the past history. Keeping the historical growth of the industry, I have formed my own views which are set forth below. They differ fundamentally in some respects and I have thought it my duty to place them before the Government while making recommendations on the issues placed before us.

2.1. **No step should be taken by Government of India which may divert the savings to less fruitful channels.**—Socialist pattern will determine the pattern of distribution of income. The pattern of production must necessarily conform to the pattern of distribution. It follows that in the present state of India's industrial development, the essential step is to choose priorities. While, on the one hand, industrialisation is in progress in rapid pace in the realm of basic and other industries, it is distressing to find, on the other hand, millions of people in half starvation and shelterless existence. In selecting priorities, food and housing will naturally occupy pre-eminent places. These involve ancillary industries and any lack of emphasis will render the above schemes ineffective. Thus the question of transport should have due share of public attention apart from its indispensibility for city transport. For all these essential requirements, financial allotments have already been considerable. No further augmentation of finance is possible without savings for which steps have been taken in all directions including country wide appeal for them. Vigorous steps are still being taken to mop up all savings from people of different social strata and put them in Government securities. Appeals and exhortations have been made so that economy may be practised, savings can be made and production may be increased. Is it imaginable that at this stage Government will take any step which will place before the people any allurement by which the savings will be directed to less fruitful channels?

2.2. It is so obvious that the purpose of savings will be totally defeated if a cheap automobile is introduced in the country at this stage so as to enable the people of the income group of Rs. 15,000 annually to possess this handsome luxury. Such an opportunity, if created by Government, will easily divert all the savings to this investment which by no means can claim priority.

31. **Passenger Bus for collective use is the real necessity for the common man.**—Nobody will deny the necessity and usefulness of automobile in the modern age and yet nobody will deny that in the placing of priorities, a car occupies a much lower position than a passenger bus. In big cities, it is far more passenger buses than small cheap cars. Whatwith maintenance expenses, whatwith lack of garage facilities, a car in a poor country like India is much less important than a bus for collective use. A large addition of passenger buses and commercial trucks is an urgent necessity.

3.2. Even if there is a genuine demand of such people for a small car, I am of the opinion that Government should largely meet their requirements by placing before them cheaper and equally quick transport, *viz.* passenger buses. To the extent that it is a false hunger, it will be checked by this

step and to the extent that is a real need, it will be met by passenger buses. This step will strengthen the domestic economy and thus India's economy as a whole will be very much strengthened.

4.1. **Stabilisation of the automobile industry (car and jeep).**—I am taking this opportunity of placing before the Government that if, by any chance, we are blinded by the glamour of cheap car without stabilising the existing manufacturing units with their large investments which have been under the protecting wings of Government of India, I fear, we shall be hitting hard not only the savings schemes but allow the past investments to go waste and Government will also have to bear the responsibility for fresh foreign exchange for new schemes.

4.2. The industry needs immediate stabilising. At this stage no step should be taken which will create confusion and problems for the industry. A cautious move, step by step, after a lapse of every two years will be a very wise action on the part of the Government. The opportunity for improving quality and quantity of the existing makes of cars has come for the first time with the availability of adequate foreign exchange. This is the time to remove all bottlenecks and modernize the plant where necessary. I am of the opinion that at least 1½ years' time should be given to the existing manufacturers to maximize their production and to rationalize their management in the best possible manner.

4.3. Since the Government are willing to allocate to this industry substantially more foreign exchange, I would expect that these units will be able to produce much more. If after this full co-operation from the Government side they cannot produce as many cars as the backlog requires, the responsibility is theirs—any step from the Government side would then be justified.

4.4. This increased output will achieve two results:—

(i) clear the arrear demand substantially,

(ii) Reduce the price per car.

It is at this stage that they will finally decide their rockbottom price when they will be actually producing to the maximum of their capacity.

4.5. The Indian automobile industry (cars) supported by three units (Hindusthan, Fiat and Standard) has been struggling hard for the last 10 or 12 years—they passed through the birth pangs of the industry—they suffered keen competition in the early years—they also got Government backing and nursing—they have off and on suffered from lack of foreign exchange. Now they cannot be bypassed and the newcomers preferred until the existing units get their first chance and having got it, fail to satisfy the public demand.

4.6. With a meagre increase of demand during the next 2/3 years if another one or two models are brought into the market, the old units will be more than weakened and new units will hardly get necessary nourishment. At this time of industrial development of our country, problems and difficulties are already abundant, and if the automobile industry adds another lot of difficulty and unrest, the present Indian economy will be badly affected. It is our duty to see that one industry after another is stabilised in India. I shall, therefore, suggest that Government may place before the existing units adequate foreign exchange for production and partial modernisation and compel them to meet the people's demand. They must reduce the prices as far as possible. Government also, in their turn, will see what reduction in the tax and duty can be effected. It is in this way that all round reduction will be possible to some extent. Thus the industry will be stabilised if they are not threatened by other units supported by Government of India.

5.1. **Comparison of prices impossible—under Indian conditions prices are likely to be high.**—For the new schemes, no probable demand-volume can be gauged with any amount of probability, since such cars will not bear the average load of an Indian family and such cars may not be suitable for use as taxies and the costing data under Indian conditions are lacking. Costing of new cars will, therefore, become a matter of guess. On the other hand, costing of the existing models has been done with meticulous care—their

popularity and load-bearing capacity being known. A comparison, at this stage, of prices of the existing cars with those new models is meaningless. Any serious proposition of a new car in a small market like India is bound to be costly—even if it is shown low initially, the cost is bound to mount up in the existing Indian conditions and foreign exchange required will be large.

5.2. It must be admitted that in the nature of things, as they appear before us, it is not possible to get any dependable details. Comparison of prices is, therefore, out of question. Some firms in a straightforward way have given cost to the tune of Rs. 7,000; and others have kept them between Rs. 5,000 and Rs. 6,000 in the hope that the figures cannot be subjected to any close scrutiny. To be very candid, I consider the lower range of prices to be more matter of imagination wishful thinking than an outcome of objective calculation.

5.3. Since I consider that introduction of a cheap car is an unwise move and directly against the avowed object of planning and since I consider that cheapening of the price of the existing cars is of prime necessity, all means at the disposal of the Government should be adopted to reduce the price of the existing cars. Thus larger output will be achieved, prices will be reduced, second-hand car market will be depressed and the normal demand with backlog of demand will be appreciably met.

6. **If "standard" is discontinued then Bangalore scheme should be taken of in the public sector.**—If for any reason production of small 'Standard' car is discontinued, then only, production of a cheaper car may be provided for but *that must be done in the public sector* so that element of competition can be introduced. I am of the opinion that in that case, Bangalore Scheme should be taken up under the auspices of the Government of India. No more should India by tied to the apron strings of any foreign country for manufacture of an automobiles (existing units have prepared the ground for independent design).

7. **Competition in the jeep manufacture.**—In the sector of passenger cars there is an element of competition, though at the present stage, there is none since the demand is much more than the actual production. But there is a potential possibility of a competition when production will exceed the demand. Such an element of competition is totally lacking in the Jeep manufacture and I suggest that another unit be created for Jeep manufacture preferably in the public sector so that there will remain a check on pricing.

8. **Complete release of the manufacturing units from Government control.**—I have another suggestion to make and the Government of India will consider how far and in what way a scheme is workable. I hold the view that time has come when Government should withdraw all nursing of the industry in the private sector after fixing a quota of foreign exchange for each Unit. They should now stand on their own legs and they may even be given a freedom to manufacture whatever they like. They will be responsible for their own fate. I suggest this because I feel that so many schemes have been placed before us for manufacture of a cheap car simply because they will be nursed by the Government of India.

9. **Central manufacturing organisation under Government auspices not favoured.**—I am opposed to the idea of any central organisation of the Government of India for the manufacture of components required for different units. I have every reason to think that this will create more trouble and headache to Government than we can imagine now.

10. **Cheapness of the quotations may be due to other advantages.**—The present manufacturers do not rely on the details of the low priced schemes (some reasons have been given in their letters). They apprehend that for some years at least, the loss on such cars will be adjusted to the gains on their other makes. They think that the truck users will subsidize the car users.

11. **Baby Hindustan not a new scheme.**—In fairness, Baby Hindustan should be given adequate foreign exchange since Government sanctioned its manufacturing programme sometime ago. It captured the Indian market—for individual use and for taxis and even now it is appreciated in every part of India as a "cheap maintenance" car. On top of these, if the manufacturers can offer it to the public for appreciably low price, it may

be put back on the road after Government withdraws the production-suspension order since foreign exchange is now available. As it is a tried car, it should not be considered a new scheme but guarantee must be taken that the price will not exceed Rs. 7,200/- to the consumer (excluding freight).

12. **Emphasis on Reduction of Prices of the existing makes by all means.**— Government have clearly made a distinction between:—

(1) reduction in the prices of the existing cars [para. (6) of the Government resolution] and

(2) introduction of a cheap car [para. (6) of the Government resolution]. This indicates that the proposed cheap car is far a lower income group. I have given my arguments earlier why I consider this step to be unwise. I want to add here that demand for cars in a poor country like India cannot be compartmentalised; in other words, the demand for small cars will very considerably affect the demand for other bigger cars. Already the economic levels for medium sized cars have not yet been achieved—any inroad into this demand by the small cars will affect them so much that a meagre increase of demand in future years may not have any favourable effect on production cost. I, therefore, finally suggest that measures for reduction [as per (b) of the Government resolution] should be forced upon the existing units and (c) of Government resolution should be dropped for the present (at least 2 years).

13. I feel I cannot agree with the statement given in Chapter VIII para 5.4 that:

> "In these conditions there can be no question of reducing taxation as a means of stimulating the demand."

and am giving my reasons below:—

The demand has increased, in spite of these deterrents, in tune with industrialisation and better distribution of wealth. This is not to say that high taxes are not serious deterrents. I have no doubt that demand would have considerably increased if these deterrents had been removed which would have resulted in lower prices. In Great Britain, Industrialisation reached a peak point some time ago and hence demand came to be established—at this stage any increase in taxes would naturally arrest demand and force exports.

ANNEXURE 1-A

AD HOC ENQUIRY ON AUTOMOBILE INDUSTRY

Second Note of Dissent by Shri B. N. Dasgupta

In the Report, on page 126, para. 7.3, prices suggested are Rs. 11,054 for Ambassador, Rs. 9.283 for Fiat and Rs. 9,516 for Standard-10. These figures are evidently based on the findings of our investigation. I, however, feel that these figures cannot be depended upon since I find many *prima facie* incongruities which vitiate the soundness of the conclusions. Some of these which are glaring to me are given below:—

(1) It is known that detailed costing has been carried out several times by the Tariff Commission from 1952 to 1956 by expert Cost Accountants and in the 1956 report of the Tariff Commission, it was stated that the Ambassador was being sold at Rs. 833 less than the cost of production. Since then the percentage of indigenous contents in that car has gone up rendering the cost higher, because, in the existing Indian conditions, the increase in the indigenous contents is accompanied by increase in cost. In this case, however, the Ambassador Car suffers a price reduction "being the difference of suggested ex-factory price over present dealer net price"; whereas, it is reverse in the case of Fiat as the outcome of investigation (though the Report has recommended the same reduction). It will thus be seen that cars with higher indigenous contents suffer a cut in the prices and car with lower indigenous contents gains in price. Any formula which leads to this position is *prima facie* unsound.

(2) Another item of importance is the computation of "Capital Employed" in the manufacturing units. In the same statement, return allowed to Ambassador, Bedford Petrol and Bedford Diesel is in the region of 70 per cent. to 80 per cent. of what has been allowed in the cases of Dodge Petrol and Diesel and 30 per cent. of what has been allowed to Tata Mercedes Truck and Bus. It is well-known that Hindusthan Moors produces a larger number of cars and trucks than either Premier Automobiles or Telco and the capital employed in the case of Hindusthan cannot be smaller—certainly its capital employed cannot be one-third or half of Telco. I have a strong *prima facie* suspicion that the calculations have not been correctly and fairly done. The capital employed in the case of Hindusthan must have been grossly underestimated or Telco's and Premier's overestimated.

(3) Our attention has been drawn to heavy rejections and wastage etc. in the case of Hindusthan Motors. This is certainly a matter which must be rectified at once. But if it is shown by the manufacturers that the rejections are due to old machineries and plant, then the explanation will not be very poor. They may point out that while the manufacturing is handicapped, consumers are not put to any disadvantage in price since what the cost suffers (cost up) by rejections, it gains (cost down) by smaller capital employed. The question is not, therefore, to be viewed from one angle only. This only leads me to the conclusion that modernisation is urgent for which foreign exchange may be adequately given.

It has been mentioned to us that the average cost of Telco in the Foundry has been found to be about double that which has been considered reasonable for inclusion in the estimated cost. This is indeed alarming yet it has certainly some explanation and also redeeming features. This provides the same type of inefficiency as Hindusthan Motors in the matter of rejections etc.—only, in the case of Telco, investment is much *more* than what is necessary and in the other case, much *less* than what is necessary.

(4) It is perplexing to see the suggestion that there should be reduction in the price of the Ambassador, while an increase has been suggested for Fiat. Yet the fact remains that the statement mentions that "the ratio of net dealer price to overseas built in price" is 1·6 in the case of Ambassador, whereas it is 2·06 in the case of Fiat, 1·9 in the case of Standard.

Looking at these figures, one should get a thorough satisfaction that with the highest indigenous contents in the Ambassador, the existing price shows the lowest ratio. This does not mean that the manufacturers should not make all out efforts to reduce cost but it does mean that there is something wrong in the suggestion that the price of Fiat should get an increase.

(5) From the figures supplied to us, it works out that the overseas Ambassador's price is higher than Fiat by more than 33 per cent. (so must be the cost), yet it was strongly contended that Ambassador should be made in India at a cost of 4½ per cent. more than Fiat. If what I understand is correct, then, how theoretical is such a proposition! As if, technological skill and demand in India are so high that we have beaten even the highly industrialised countries of U.K. and the Continent in production cost. Logically it follows that this unit in particular should be pressed to reduce the cost. But frankly speaking, I doubt if the figures are fully dependable. If they are, the malady is grave because in the future, as more indigenous contents will come into the cost, the ex-factory cost of Fiat will rise still more in spite of the fact that larger production may tend to lower the price.

Looking at these figures, I wonder if one will not be fully justified in giving high compliments to Hindusthan Motors for bringing down the ratio to 1·6 whereas even Telco has not gone below 1·7 and Jeep not gone below 1·6 and it must be borne in mind that a truck manufacture is much less complicated than a car manufacture.

(6) The working capital of Hindusthan has been taken at a figure about 25 per cent. less than Premier's and 50 per cent. less than Telco's. Looking at the above figures, one must have serious doubts because the ratios between them are simply untenable.

I have doubts about the soundness of the conclusions also.

(7) If these very figures are used to find out "capital employed per Unit of output", the results may be most alarming.

It is the usual rule in such investigations that a very careful calculation is made about the "capital employed" as *"Should be"* in a representative factory taking into account the quality, quantity etc. of the products. The amounts of capital employed should take into consideration what ancillary components, under Indian conditions, should be done by the car manufacturers. Thus the capitals employed by different Units should come under one standard.

(8) One outstanding matter of the greatest importance where I differ radically from my colleagues is in respect of para. 11.2(c) of Chapter VII of the main report where it has been stated:—

> ".....In this context we would also add that in general it is not advisable for the same firm to have more than one manufacturing programme in hand."

I hold the view that it should be just the reverse. It is essential for the same firm to have as many programmes as they can tackle or experiment with since they are the experts in the line and as they gain in experience and resource, they are the only agents to reduce the cost and satisfy the consumers by a variety of models. They will make their own design. To clarify my position, I want to say that no new manufacturer other than those who are now holding the field should be brought in. The existing manufacturers should be given free choice to satisfy the consumers by any make or any model of car as in Europe and America (*e.g.* General Motors etc.). The Government will only see that foreign exchange is given for *capital requirements only* and no import of components should be allowed except proprietory parts so long as the latter are not made in the country.

In this report, we are giving full choice to the manufacturers of trucks to produce different models of truck with different payload capacity. I do not understand why the car manufacturers cannot be given the same choice with regard to car. Let nobody have a sheltered market—a free competition at this stage will settle the vexed question as to which Unit is serious and which Unit is confident and resourceful without the constant aid of the Government.

(9) I maintain that after 15 years of close supervision by Government, the time has come when these Units should be left free to compete amongst themselves, Government having fixed a reasonable quota of foreign exchange in view of their capital requirements and past achievements. Some new Units are now anxious to come in for car manufacture after the field is created by others *i.e.* the pioneers of the industry (Hindusthan, Premiers and Standard) in the expectation that the Government of India's spoon-feeding will continue for a long time. but this will be unfair to those who took the risk in the beginning.

(10) According to the main report, there would be the following truck, cars, jeep and 3 wheeler manufacturers:—

Hindusthan
Premier
Telco
Ashoke Leyland
Standard
Mahindra & Mahindra
Tempo
Simpson.

Thus, there will be 8 in number. On principle, I am strongly opposed to more than four or five in India, because, I feel that such a large number of manufacturing Units in a country like India would be an insurmountable obstacle in the matter of gradually reducing the cost of production. My impression is that in U.S.A., England and Germany the number of producing Units would not exceed five or six and that is why they have been able to keep the production cost low. Although the demand there is incomparably higher, still, the number has been kept to five or six. I would, therefore, suggest that for India we should have as few as possible *i.e.*

Hindusthan
Premier
Telco
Ashoke Leyland
Mahindra & Mahindra and
Tempo.

If Standard Motors can continue with Standard-10 which I consider to be a small Car, then only it should remain—otherwise, it should vacate the field. If it fails with Standard-10, any better future cannot be promised by a change-over. Sometime ago I heard a report that Ford Co. would be interested at this stage to be associated with Simpson. If the rumour has no basis, I have nothing to say. But if the rumour has any basis, then I would very strongly disapprove of bringing, at such a late stage, a Company like Ford with enormous resources at their command. When the Tariff Commission asked them in 1952-53 if they would take up car production in India, they did not agree to come into the field and when the Indian industry has developed to this stage, I for one would not at all approve of their or any other foreign firm collaborating with any Indian firm now. I would, however, make a suggestion:—

The sanctioned capacity of Simpsons which is 3,000 engines at present should not be allowed to expand but this number should be produced and the Government should insist on Hindusthan Motors and Premier Automobiles to absorb these 3,000 engines so that Simpsons may not suffer any loss. To make it clear, between the Hindusthan Motors and Premier Automobiles, their first requirements of diesel engines should come from Perkins upto 3,000 engines and any further requirement will be met from their own production. On this condition, Hindusthan Motors and Premier Automobiles should be allowed to make their own engines.

(11) Page 33, para. 4.4. of the main report, it has been stated that it would be desirable to provide competition by expanding productive capacity of the existing units, yet an additional unit for small car has been recommended. I fail to understand it.

(12) Page 37, para. 7.1, I do not agree with the view expressed that there is a serious lack of cost accounting system in the Automobile industry. I agree that there are defects and they should be rectified, as production increases.

(13) In para. 4.4 of Chapter V, it has been stated that Bedford Diesel landed cost (Col. 3) is Rs. 6,200 and its price (Col. 4) Rs. 9,795. It is a faulty comparison since a higher priced engine of Indian make of another type is included in the latter figure.

(14) I do not consider it fair to compare a Company which produces a full *car* with that which produces an *engine* only or a *truck*, except in a limited field. In Chapter V, paragraph (4.4) comparison between columns 3 and 4 is misleading in respect of item No. 9—Jeep. The reasons are—firstly, American components are priced higher than U.K. or German and secondly the indigenous parts refer to Jeep parts which are much simpler not requiring processing and finishing as a car would require. Therefore, to say that ancillary components are bought by Mahindra and Mahindra at a much cheaper price may be half truth.

(15) In Chapter VII, para. 11.4, the report recommends the restoration of import licence for Vanguard. I think that it neither helps the manufacturer nor the industry. I repeat what I have stated many times *i.e.* that Standard Motors should continue with small 10 and every possible effort should be made to consolidate its position.

In this connection, I must say that the Government attitude about the case of Baby Hindusthan is not understandable. I do not know of any other case where a manufacturer who was licensed to produce a car or a truck has been stopped from doing so after sanction was given by Government. In the case of Hindusthan Motors, import licence for Baby Hindusthan has been suspended which should be forthwith restored as Vanguard. This is only a fair deal since this small car is still exceptionally popular.

(16) I am strongly of the opinion that—

(a) All duties on imported components should be considerably raised after 1½ years within which period the manufacturing Units should be self-sufficient in India (except proprietory parts);

(b) Government should considerably reduce taxes;

(c) Excise duties on original equipment should be abolished.

(17) Page 120, para. 3—it is stated that "investment in the automobile industry deserves some incentives". Yet I find that an *ad hoc* reduction in the price has been recommended without specifying any item in which there is sufficient case for cut. Either the costing details should clearly indicate it, or in the alternative, leaving costing conclusions, full competition should be allowed between the units.

(18) Page 123, para. 6.1, I consider it very unsound in theory and in practice that one type of vehicle (*viz.* Car) should suffer price control and the other type of vehicle (commercial Truck) should enjoy full freedom from control. Besides this, my fundamental objection is against the recommendation made in the report that the car price may be adjusted against the truck price. Nothing can be more unfair than this. This suggestion will have a dangerous effect—it will bid good-bye to the importance of costing and dishonesty of all types will result. Surely, after a long period of deliberation, such a proposal will be a very poor performance. I entirely dissociate myself from this recommendation.

(19) Page 123, para. 6.1(c), this recommendation will have no meaning, under the present conditions of the market in India, unless negotiations are done through the Government of India. Such a procedure will indirectly mean some kind of price control for trucks.

(20) Page 70, para. 5.1, it is true that the demand of Leyland Vehicles is small but if it means monopoly then it is not only bad for the Leyland consumers but it seems to me that it goes against the provision of the Indian Constitution. I, therefore, suggest that the Ordnance Factories under the Defence Department should be allowed to manufacture all kinds of vehicles including heavy vehicles as well as Jeep.

When price control is removed from Truck manufactures and competition is also absent, the consumers *i.e.* the State Transport undertakings will have constant trouble in respect of price—ultimately it will affect the passenger fares and the common man will be affected.

B. N. DAS GUPTA,

Member, Ad Hoc Committee for Enquiry into Automobile Industry in India.

ANNEXURE II

MEMORANDUM TO THE JHA COMMITTEE

from

THE INDIAN ROADS & TRANSPORT DEVELOPMENT ASSOCIATION LTD., BOMBAY

1. During the First Plan there were complaints in 1953 about the inadequacy of rail transport in the country. They led to the appointment of a Study Group to investigate them and to suggest remedies. During the Second Plan there have been complaints about the inadequacy of road transport. This recurrence of complaints about one service or another from Plan to Plan points, in our opinion, to the need to formulate a basis for estimating in advance the transport requirements of each Plan and for making provision for them, including the foreign exchange element, to ensure adequacy of transport to a reasonable extent and to avoid having to deal with complaints from time to time.

2. With this end in view we enclose a comprehensive note on the Requirements of Road Transport during the Second and Third Plans and request the Committee to examine the basis put forward in it and express its opinion on it.

3. In regard to the queries raised in your letter No. IA(N)-31/59, dated 14th May, 1959 our views are as follows:—

(i) For reasons mentioned in the Note it is necessary to accord first priority to the Development of road transport, in the first instance, up to the end of the Third Plan.

(ii) It would be more economical to find at this stage the requisite foreign exchange for this development than to leave over the issue to a later date since if the present shortage of vehicles continues it may be necessary within the next few years to import vehicles in CKD packs to meet the country's needs. This will entail more foreign exchange.

(iii) The best way to ensure economic prices is, in our opinion, to raise the actual output of the present makes of cars and commercial vehicles to the full capacity of the factories. For this purpose, adequate foreign exchange should first be made available to the existing manufacturers. The feasibility of introducing any additional make of vehicle, such as a cheap car, may be investigated on the basis that foreign exchange would become available for the purpose after the existing programmes have been completed and the maximum possible indigenous content is reached.

(iv) The requirements of automobiles are as follows:

	Second Plan	Third Plan	Total
Cars and Jeeps	90,000	2,00,000	2,90,000
Load-carrying vehicles	77,000	2,15,000	2,92,000
Passenger-carrying vehicles	23,000	60,000	83,000
TOTAL .	1,90,000	4,75,000	6,65,000

REQUIREMENTS OF ROAD TRANSPORT IN THE SECOND AND THIRD PLANS

INTRODUCTORY

1. In para. 12.5 of its 1956 Report the Tariff Commission has observed as follows in regard to the assessment of transport requirements of the Second Five-Year Plan:—

> "The transport requirements of the Plan could be estimated in various ways, one of which would be by taking into account the possible relationship between an increase in the national income and the corresponding increase in transport requirements."

The Commission then proceeds to analyse the railway requirements for the Second Plan on the basis of an increase in the national income during the First and its relationship to the estimated increase in traffic and observes that "similar figures for other forms of transport are not available but the demands on them also may be expected to increase more or less in the same proportion".

2. The basic year on this basis has to be 1950-51 before the First Plan commenced. Hence, the employment of this basis in the case of various transport services should be right if their 1950-51 traffic capacities were more or less equitable. This has not been the case in respect of road transport and shipping for reasons which are well-known. Hence, the figures arrived at for each form of transport on the basis of an increase in national income and the corresponding increase in transport requirements will require a correction to bring up the backward forms to an equitable level. Subject to this observation we feel that it may be useful to examine the transport provision for the Second and Third Plans on the basis of an increase in national income as suggested by the Commission since the final figures for the First Plan which were not available at the time of the Commission's Report in 1956 are now available. It is also possible to form an idea of the requirements of goods transport from the targets of production of various commodities but similar data cannot be employed in the case of passenger transport. Here, a reasonable basis seems to be the per cent. increase in national income from Plan to Plan. Hence, the same basis may be employed in the case of both passenger and goods transport to see how far the figures obtained are borne out by results. Such a procedure may also provide a basis for comparing the targets for various services set by the Planning Commission.

Estimate of Motor Transport on the basis of National Income.

3. During the First Five-Year Plan the per cent. increase in the number of various motor vehicles in relation to the per cent. increase in the National Income of the country was as follows (Enclosure 1):—

Motor cycles, etc.	2·9 times.
Jeeps and cars	1·5 times.
Passenger vehicles	1·9 times.
Goods vehicles	2·5 times.

4. On the basis of the same relationship to the per cent increase in the national income during the Second and Third Plans the motor vehicle requirements of those Plans work out as follows (Enclosure 2):—

	Motor cycles, etc.	Jeeps, cars, etc.	Passenger vehicles	Good vehicles
Second Plan	29,000	75,000	21,000	74,000
Third Plan	56,000	1,15,000	35,000	1,35,000
	85,000	1,90,000	56,000	2,09,000

5. In para. 12.2 of its 1956 Report the Tariff Commission has indicated an 8 per cent. replacement per annum for motor cars on the basis of a 12-year life and a 10 per cent. replacement per annum for commercial vehicles on the basis of a 10-year life. However, it has mentioned that in actual practice replacements did not work out to these percentages. We feel that in the absence of information about the number of vehicles actually scrapped from year to year provision for replacements on the basis of an estimated life of a vehicle will be hypothetical. Thus, the number of vehicles scrapped in the U.S.A. during the ten years 1947 to 1956 works out to 6·8 per cent. per annum in the case of cars and 6:2 per cent. per annum in the case of trucks of the number of vehicles in each category in the country each year (Enclosure 3). These figures are below those indicated by the Commission. Still we feel that in view of our difficulties in regard to foreign exchange we should go below the U.S.A. figures also and provide, till the end of the Third Plan and subject to revision later, replacements at 4 per cent. per annum in the case of cars and 5 per cent. per annum in the case of other vehicles *i.e.* half the allowance indicated by the Commission and about two-thirds of the U.S.A. figure. Further, these percentages may be applied to the number of vehicles in the country at the beginning of each Plan instead of to their yearly number during the period of the Plan. This will reduce the number to be provided by a further about 20 per cent. so that the replacements will be about 3¼ per cent. per annum in the case of cars and about 4·5 per cent. per annum in the case of other vehicles. This procedure will meet the present difficulties of foreign exchange to a large extent without having to cut into the requirements of traffic. On this basis minimum replacements work out as follows (Enclosure 3A):—

	Motor cycles, etc.	Jeeps, cars, etc.	Passenger vehicles	Goods vehicles.
Second Plan	10,000	40,000	11,000	29,000
Third Plan	17,000	55,000	17,000	48,000
TOTAL	27,000	95,000	28,000	77,000

6. Combining the figures in paras. 4 and 5 the production targets for automobiles for the two Plans work out as follows:—

	Motor cycles, etc.	Jeeps, cars, etc.	Passenger vehicles	Goods vehicles
Second Plan	39,000	1,15,000	32,000	1,03,000
			1,35,000	
Third Plan	73,000	1,70,000	52,000	1,83,000
			2,35,000	
TOTAL .	1,12,000	2,85,000	84,000	2,86,000
			3,70,000	

ADJUSTMENTS

7. Since the above requirements have been based on the number of vehicles operating in the country in 1950-51 it is necessary to see whether there have been any changes in the operating conditions of motor vehicles since that year warranting any adjustments in the figures arrived at. There have been no changes in the operating conditions of motor cycles and cars. In regard to commercial vehicles the main changes are:—

(i) Raising in 1957 the permissible laden weight of medium vehicles from 14,500 to 18,000 lbs.

(ii) Specifying in 1958 a gross laden weight of 27,000 lbs. in the case of a few national highways and allowing an increase in load of 25 per cent. in the case of vehicles manufactured since 1953, and

(iii) Suggesting in 1959 the possibility of employing semi-trailers and/or truck-trailers combinations on roads having a carriageway of 22 feet.

We feel that it is too early to assess the effect of these improvements on the number of commercial vehicles required since the full implementation of these changes will not be effective till States agree to them and States are known to be unwilling to accept them in full till the condition of certain roads and bridges is improved. It has been mentioned that a number of old bridges and culverts in the country are not capable of taking heavy loads, that the road beds of some roads require strengthening and that there are not many roads in the country having a carriageway of 22 feet. Until these improvements are carried out the changes in the operating conditions of commercial vehicles will not be fully effective. Therefore, it will be hypothetical at this stage to suggest any adjustment in the number of vehicles on their account.

8. On the other hand, long-distance road traffic which was not permitted in 1950-51 is now beginning to develop on account of relaxation in licensing procedure and there are definite indications of public preference for it for certain commodities on main roads. Our Parliament also is in favour of such a development as evidenced by its refusal to incorporate a distance limit on road transport in the Motor Vehicles Amendment Act of 1956 and the recent debate in the two Houses on rail/road co-ordination. This development will require extra vehicles for which there was no provision in 1950-51 figures. Hence, we feel that these two factors, *i.e.* betterment in the operating conditions of vehicles on the one hand and the need to place on road extra vehicles for originating long-distance traffic on the other may cancel one another to a large extent and it will be premature to suggest specific provision either for the one or for the other till after the end of the Third Plan.

PLAN TARGETS

9. Against 1,15,000 Jeeps, cars, etc., and 1,35,000 commercial vehicles as the likely requirements of the Second Plan on the basis of an increase in national income as per para. 6 the number of vehicles that would have been produced in the country according to the production target in that plan fixed by the Planning Commission works out to 1,00,000 jeeps, cars etc., and 1,40,000 commercial vehicles (Enclosure 4, item 5). Thus the target agrees with the figures based on National Income in the case of commercial vehicles but was 15000 vehicles less in the case of cars. The probable reason for this may be that in those days Government were thinking more about commercial vehicles than about cars. On 27th March 1958 the Minister of State for Transport mentioned in the Lok Sabha the following likely targets for commercial vehicles for the years 1957-58 to 1960-61:—

1957-58	20,000
1958-59	32,000
1959-60	39,000
1960-61	45,000
	1,36,000

Adding 14,000 vehicles produced in 1956-57 the number comes to 1,50,000 *i.e.* 15,000 more than required on the basis of national income and exactly the same figure as was reduced on cars. In other words, the total production of cars and commercial vehicles would have been the same as that required on the basis of national income. It is a pity, that subsequent events prevented the full implementation of these targets since had it been possible to proceed with the original programme the country would have obtained definite data for the production of automobiles during the Third and perhaps

subsequent Plans also. However, in spite of the difficulties during the Second Plan we are of the opinion that the basis of national income should not be abandoned and that the requirements of the Second and Third Plan should be combined on that basis and implemented fully till the issue is reviewed again say in 1966-67.

SUGGESTED TARGETS

10. During the first three years of the Second Plan 46,000 cars and 45,000 commercial vehicles were produced against about 54,500 cars and 65,000 commercial vehicles which should have been produced according to Planning Commission's targets (Enclosure 4). It does not seem likely that the back-log can be made good entirely during 1959-60 and 1960-61 but we are of the opinion that 44,000 cars and 55,000 commercial vehicles should be produced during these two years, bringing the total production during the Second Plan to 90,000 cars and 1,00,000 commercial vehicles. The balance should be carried forward to the Third Plan.

11. On this basis the number of vehicles to be produced during the two Plans will work out as follows:—

	Jeeps, cars, etc.	Passenger vehicles	Goods vehicles
(*i*) For the 2nd and 3rd Plans as per para. 6 .	2,85,000	84,000	2,86,000
(*ii*) Suggested target for the 2nd Plan as per para. 10*	90,000	23,000	77,000
(*iii*) Balance for the 3rd Plan	1,95,000	61,000	2,09,000
Say .	2,00,000	60,000	2,15,000

On the basis of replacements mentioned in para. 5 for the number of vehicles required as per para. 6 the addition to the fleet during the Second Plan will be about 60,000 cars and 72,000 trucks and during the Third Plan 1,34,000 cars and 1,98,000 commercial vehicles. We have pointed out in para. 9 that the Planning Commission's original target for automobiles confirmed very nearly to the figures arrived at on the basis of national income. Therefore, we would suggest that as soon as this target is reached say in about another 3 years or so the position may be examined again in the light of fresh experience to see whether and if so to what extent any adjustments are required in the target for the Third Plan suggested above. On the other hand if as a result of the various schemes of foreign aid reported to be under consideration the general position of foreign exchange improves there may be no need to effect any adjustments.

RAILWAY CAPACITY

12. At this stage it may be useful to see how the application of the basis of an increase in national income works out in the case of the railways. During the 1st 5-year Plan there was no increase in railway passenger traffic (Col. 2, Enclosure 5). Applying the *ad hoc* increase of 15 per cent. fixed by the Planning Commission the estimated passenger traffic in 1960-61 and 1965-66 work out to 1,491 and 1,744 million passengers respectively. This is obviously on the low side since the traffic in 1957-58, *i.e.*, 3 years before 1960-61 was 1,431 million passengers. This fact suggests that the railway provision for passenger traffic is on the low side and requires to be stepped up. On the other hand, the railway's goods traffic which works out to 155 million tons (Enclosure 5, column 3) in 1960-61 has been stepped up to 168 million tons. In other words, the railway's passenger traffic was under-provided and the goods traffic over-provided. This has been borne out by results; the over-crowding of passenger trains is being continuously complained of by the public and in regard to goods traffic the railways have admitted that they have surplus capacity on certain routes. In view of these results we feel that the railway capacity also for the Third Plan should be based on

*Same ratio for passenger and goods vehicles as in (*i*).

the national income as in the case of road transport. It may be interesting to note here that against about 216 million tons of goods traffic for the railways for the year 1965-66 arrived at on this basis in Enclosure 5, the figure arrived at by the Chief Engineers for the railways for that year in their Road Development Plan for India 1961—1981 in Appendix III, Column 5, page 62, on the basis of traffic likely to be generated by the targets of production for various commodities is 228 million tons, some 6 per cent. high. This fact suggests that the basis indicated by the Tariff Commission is supported by the basis of traffic likely to be generated. Hence, it should be employed in the first instance subject to adjustments if any in the light of experience. Had this been done at the beginning of the Second Plan the amount of foreign exchange which has been allotted to the railways would not have been required and the prunning of automobile targets which took place during the first three years of that Plan may possibly have been avoided. This should not be allowed to happen during the Third Plan.

FOREIGN EXCHANGE

13. There has been unanimity of opinion in the country on the need to develop road transport. Side by side, there is considerable shortage of both passenger and commercial vehicles as a result of which a premium market has sprung up. Finally, there has been a demand to try and bring down the prices of vehicles. The solution to all these problems is a determined effort to raise the production target of vehicles during the next 7 years upto the end of the Third Plan. We are convinced that unless this is done the present position will not ease.

14. In its 1956 report the Tariff Commission made a number of recommendations for developing road transport. The Central Government has implemented most of them and has created a climate suitable for such development. However, all this will be of no avail until the requisite number of vehicles is forthcoming. Hence, it is absolutely essential to fix a reasonable target of production based on the purchasing power of the country in terms of national income and to implement it fully.

15. We are aware of the difficulties about foreign exchange. To meet them we have suggested in para. 5 a smaller provision for replacements. Further, in working out that provision we have omitted additions to the fleet from year to year, as a result of which the replacements suggested are some 20 per cent. less than those on the attenuated provision (see note Enclosure IIIA). We feel that this is the very maximum which can be allowed to meet the difficulties of foreign exchange. In regard to the requirements of traffic we are unable to suggest any reduction. In the case of a developing economy recourse to foreign exchange is inevitable and such difficulties as may arise in this respect have to be faced. That this is feasible has been proved in the case of the railways for whom it has been possible for the Government to find the necessary foreign exchange in an ample measure from various sources in the Second Plan. This is a question of priorities. Government could meet the monetary requirements of the railways so far since it believed that the development of the railways was necessary for the implementation of the Second Plan although as has been shown above this development should have been less on the basis of an increase in national income. Therefore, from now onwards the priority will have to change in favour of road transport which will have to play an increasing role in the transportation of finished goods as the tempo of our industrialisation grows. We are of the opinion that in the Third Plan first priority should be given to the development of road transport and such foreign exchange as may be required for the purpose should be found instead of making its development dependent on such foreign exchange as may be available.

REASONS FOR PRIORITY

16. There are four reasons for according such priority:—

(i) Growing industrialisation of the country.

(ii) Need to utilise the country's investment in roads.

(iii) The employment potential of the road transport industry.

(iv) A high return from taxation from motor vehicles.

INDUSTRIALISATION

17. The development of industries depends to a large extent on the quick turn-over of finished goods. Unlike raw materials finished goods require expensive storage the cost of which can be minimised only by providing a sufficiently quick transport. Moreover, the distribution of finished goods has to be in the hands of dealers who being relatively small people cannot afford to look up their capital. Therefore, they look for that reason to a quick means of communication. This is where road transport will play a vital role in our economy since it travels three times as fast as a railway wagon. A Government intent on industrialisation cannot afford to overlook this important point.

UTILISATION OF INVESTMENT

18. By the end of the Second Five-Year Plan the country's investment in roads will be about Rs. 726 crores; by the end of the Third Plan it may well go over Rs. 1,100 crores. The extent to which this investment is being utilised at present and will be utilised if the targets for the production of cars and commercial vehicles suggested above are accepted can be seen from the following table:—

Year	1950-51	1955-56	1960-61	1965-66
1. Mileage of surfaced roads . .	97,500	1,21,600	1,44,000	1,71,000
2. Number of cars in round figures .	1,59,000	2,03,000	2,63,000 (2·03+ 0·60)	3,97,000 (2·63+ 1·34)
3. Number of commercial vehicles in round figures	1,16,000	1,65,000	2,37,000 (1·65+ 0·72)	4,35,000 (2·37+ 1·98)
4. Cars per mile	1·63	1·67	1·82	2·32
5. Commercial vehicles per mile . .	1·19	1·36	1·64	2·54

The utilisation of roads in other countries is much higher than in our case. Thus in 1956 there were about 28 motor cars and 9 commercial vehicles per mile of surfaced roads in Great Britain. Taking half these numbers as the optimum to be aimed at and taking one commercial vehicle as equivalent to 3 cars the optimum intensity works out to about 9 commercial vehicles per mile of surfaced road. Against this the intensity in our case in 1965-66 on the figures shown above works out to $\frac{2\cdot32}{3}$ plus $2\cdot54=3\cdot31$ *i.e.*, a little over one-third. This means that nearly two-thirds of our Rs. 1,100 crore investment in roads, *i.e.*, nearly Rs. 700 crores will be unutilised entailing a loss of interest at 4 per cent. of Rs. 28 crores per annum.

EMPLOYMENT

19. Road transport plays an important role in providing employment. In 1957 road transport provided employment for about 11 million hands in the U.S.A. out of a population of 172 million. Of the persons employed in that country one of every seven was in the road transport industry. In our country the position about employment in road and rail transport in 1957-58 was as follows:—

	Roads	Railways
(*i*) Goods traffic, million ton-miles	11,440	44,897
(*ii*) Passenger traffic, million passenger miles . . .	37,700	42,333
(*iii*) Workers employed, million	2·7	1·3*

*Including 2 lakhs of workers on projects.

Taking a passenger including luggage at 200 lbs. the passenger traffic for roads and railways works out to 3,366 and 3,779 million ton-miles respectively. Adding it to the goods traffic the above relationship can be expressed as follows:—

	Roads	Railways
Total ton-miles, millions	11,440+ 3,366 =14,806	44,897+ 3,779 =48,676
Workers employed, millions	2·7	1·3
Workers employed per 100,000 million ton-miles	18·24	2·66
Ratio	7	1

Thus, for the same load road transport provides employment for about 7 times as many hands as rail transport.

The effect of increasing the number of vehicles, both cars and commercial vehicles by about 2¼ times from 3·68 lakhs in 1955-56 to 8·32 lakhs in 1965-66 will be to raise the employment potential of the industry to over 6 million hands. This is an important aspect in fixing priorities.

RETURN TO THE STATE

20. In 1956-57 total receipts from all taxes on motor vehicles were about Rs. 79 crores. Deducting about Rs. 15 crores for revenue duty, about Rs. 22½ crores for road maintenance and about Rs. 4½ crores contributed to the Central Road Fund the balance available representing net yield to the State was about Rs. 37 crores from about 4 lakhs of vehicles, excluding motor cycles, *i.e.*, roughly Rs. 900 per vehicle. On account of various extra levies since made, *viz.*, a surcharge on motor spirit in 1957, additional excise on diesel and tyres in 1959 and, certain levies by States since 1956-57, the average may now be about Rs. 1,000 per vehicle. At this figure the net yield from 8·32 lakhs of vehicles in 1965-66 will be about Rs. 83 crores on an estimated investment of about Rs. 1,100 crores on roads against a dividend to General Revenues of Rs. 44·4 crores from the railways in 1957-58 on a capital-at-charge of Rs. 1,229 crores. These figures of relative return on investment as also the amount of extra income-tax which will accrue from the employment of additional commercial vehicles should be of some assistance in fixing priorities.

SUMMARY

21. Summarising we are of the opinion that:—

(i) The passenger and goods traffic requirements of road and rail transport in each Plan should, in the first instance, be based on the relationship between an increase in national income and an increase in the number of vehicles or traffic during the previous Plan, subject to adjustments, if any, later in the light of experience.

(ii) Judged by this basis the Planning Commission's provision for railway goods traffic in the Second Plan was on the high side. This has been borne out by results.

(iii) The Commission's original provision for passenger road transport in that Plan was on the low side while that for goods transport was correct.

(iv) Greater priority was given to rail than to road transport during the Second Plan as evidenced by the fact that while the targets for rail transport have been substantially adhered to these for road transport were materially reduced during the first three years of that Plan.

(v) For this reason it is suggested that the provision for road transport in the Second and Third Plans should be combined thus carrying forward the back-log in the Second Plan.

(vi) The automobile production for the two Plans should be as follows:—

	Jeeps, Cars, etc.	Passenger Vehicles	Goods Vehicles
Second Plan	90,000	23,000	77,000
Third Plan	2,00,000	60,000	2,15,000
TOTAL .	2,90,000	83,000	2,92,000

NOTE.—In 1955, 1956 and 1957 Jeeps and station wagons accounted for about 29·5% of the total production for cars, jeeps and station wagons.

(vii) Provision for railway goods traffic during the Third Plan should be 216 million tons to be reached in 1965-66. Provision for extra passenger traffic should be at 20 per cent. if not more.

(viii) In view of the fact that during the first two Plans the railways received first priority it is suggested that road transport should receive first priority during the Third Plan for the following reasons:

(a) Public preference for it for certain commodities on account of speed, door-to-door service and benefits arising therefrom.

(b) The insufficient utilisation of our roads has been entailing a loss on the country of about Rs. 28 crores per annum by way of interest paid on unutilised investment.

(c) For the same load road transport employs currently about seven times as many hands as the railways.

(d) On the basis of our recommendations road transport will pay to the State a net return of some Rs. 83 crores on an investment of about Rs. 1,100 crores on roads by 1965-66 against Rs. 44·4 crores returned by the railways on an investment of Rs. 1,229 crores in 1957-58.

ENCLOSURE 1

Number of Motor Vehicles in relation to National Income in the First Plan

No.	Item	Motor Cycles, etc.	Jeeps, Cars, etc.	Passenger Vehicles	Goods Vehicles	
1.	Vehicles in 1955/56.	40,961	2,03,184	46,461	1,19,097	B.R.S. VIII, P. 17.
2.	Vehicles in 1950/51.	26,860	1,59,263	34,411	81,888	Study Group Report.
3.	Increase in 1st Plan.	14,101	43,921	12,050	37,209	
4.	% increase on 1950/51.	52·5	27·6	35·0	45·4	
5.	% increase in 1st Plan in National Income over that in 1950/51.	18·0	18·0	18·0	18·0	
6.	Relation of Items 4 to 5.	2·9	1·5	1·9	2·5	

ENCLOSURE 2

Number of Motor Vehicles in relation to National Income in the Second and Third Plans on the basis of increase in vehicles during the First Plan

No.	Items	Motor Cycles, etc.	Jeeps, Cars, etc.	Passenger Vehicles	Goods Vehicles
1.	Vehicles in 1955/56 .	40,961	2,03,184	46,461	1,19,097
	Say .	41,000	2,03,000	46,000	1,19,000
2.	% increase in 2nd Plan corresponding to an increase of 24·8% in N.I. .	24·8×2·9 = 72	24·8×1·5 = 37	24.8×1·9 = 47	24·8×2·5 = 62
3.	Number of vehicles required in round figures (Item 1 × Item 2) . .	29,520	75,110	21,620	73,780
	Say .	29,000	75,000	21,000	74,000
4.	Vehicles in 1960/61. (Item 1+3) . .	70,000	2,78,000	67,000	1,93,000
5.	% increase in 3rd Plan corresponding to an increase of 28% in N. I. . .	28 × 2·9 = 81	28 × 1·5 = 42	28× 1·9 = 53	28 × 2·5 = 70
6.	Number of Vehicles required in round figures (Item 4 × Item 5) . .	56,700	1,16,760	35,510	1,35,100
	Say .	56,000	1,15,000	35,000	1,35,000

ENCLOSURE 3

Ratio of Vehicles scrapped to total registrations in the U. S. A.

P. S. and 18, Automobile Facts and Figures 1958

Years	Vehicles registered	Vehicles scrapped	Per cent scrapped to registered
	PASSENGER CABS		
1947	30,845,350	1,374,000	4·5
1948	33,350,894	1,780,000	5·3
1949	36,453,351	2,616,000	7·2
1950	40,333,591	2,598,000	6·4
1951	42,682,591	3,122,000	7·3
1952	43,817,580	3,163,000	7·2
1953	46,422,443	3,466,000	7·5
1954	48,461,219	3,840,000	7·9
1955	52,135,583	3,773,000	7·2
1956	54,200,784	4,327,000	8·0
		Average	6·8
	BUSES AND TRUCKS		
1947	6,996,148	437,000	6·2
1948	7,734,637	495,000	6·4
1949	8,236,945	535,000	6·5
1950	8,861,621	636,000	7·2
1951	9,266,215	652,000	7·0
1952	9,483,749	604,000	6·4
1953	9,832,063	588,000	6·0
1954	10,081,718	513,000	5·1
1955	10,591,590	619,000	5·8
1956	10,981,776	621,000	5·8
		Average	6·2

ENCLOSURE 3-A

Replacements

At 5% p.a. for motor Cycles

4% „ „ „ Cars

5% „ „ „ Commercial Vehicles.

No.	Item	Motor Cycles, etc.	Jeeps, Cars, etc.	Passenger Vehicles	Goods Vehicles
	SECOND PLAN				
1.	Vehicles in 1955/56 in round figures (Item 1, Encl. 2)	41,000	2,03,000	46,000	1,19,000
2.	Replacements in 5 years . . .	25%	25%	25%	25%
3.	Vehicles for replacement . . .	10,000	40,000	11,000	29,000
	THIRD PLAN				
4.	Vehicles in 1960/61 (Item 4, Encl. 2) .	70,000	2,78,000	67,000	1,93,000
5.	Replacements in 5 years . . .	25%	25%	25%	25%
6.	Vehicles for replacement . . .	17,500	55,600	16,750	48,250
	Say .	17,000	55,000	17,000	48,000

NOTE.—The replacements arrived at above are less than those required since they have been based on the number of vehicles in the country at the beginning of each Plan instead of on the yearly additions to it. Thus, in case of cars the replacements should be as follows :—

	Year	Vehicles	Replacements at 4%
	1955/56	2,03,000	
Second Plan .	1956/57	2,18,000	8,720
	1957/58	2,33,000	9,320
	1958/59	2,48,000	9,920
	1959/60	2,63,000	10,520
	1960/61	2,78,000	11,120
			49,600 Say 50,000

Against this only 40,000 have been provided, *i.e.*, some 20% less.

ENCLOSURE 4

Estimated number of vehicles on the basis of production target set for the Second Five Year Plan.

Year	Cars, Jeeps and Station wagons		Commercial Vehicles		
1. 1960/61 target . . .	25,000		40,000		
2. 1955 production . .	13,591		9,493		B.R.S. VIII P. 8.
3. Difference in 5 years .	11,409		30,507		
4. ,, P.a. . . .	2,282		6,101		
Say .	2,300		6,100		
5. Estimated *pro rata* production stepping up cars, etc., by 2,300 and commercial vehicles by 6,100 p.a.					
1956	15,900	54,600	15,600	65,100	
1957	18,200		21,700		
1958	20,500		27,800		
1959	22,800	47,900	33,900	73,900	
1960	25,100		40,000		
	1,02,500		1,39,000		
Say .	1,00,000		1,40,000		
6. Number of vehicles produced during the first three years of the Plan.					
1956	17,995		14,143		B.R.S. VIII, P. 8. Monthly statistics of production for December, 1958, P. 54.
1957	16,810		16,248		
1958	11,663		15,125		
	46,468		45,516		
Say	46,000		45,000		
7. Production suggested for 1959 and 1960 . .	44,000		55,000		
8. Total for the Second Plan .	90,000		1,00,000		

ENCLOSURE 5

Rail traffic on the basis of National Income

	Item	Passengers in Millions	Goods in Million Tons
	(1)	(2)	(3)
1st Plan	1. Traffic handled in 1955/56	1,297	115
	2. „ „ 1950/51	1,308	92
	3. Increase in 1st Plan .	..	23
	4. % increase over 1950/51	..	25
	5. Do. in National Income	18	18
	6. Relation of Item 4 to item 5.	..	1·4
	7. *Traffic in 1955/56* .	1,297	115 = 115
2nd Plan	8. % increase in N.I. in Second Plan .	24·8	24·8
	9. Corresponding % increase in traffic. .	15% allowed.	24·8 × 1·4=34·72
	10. Increase in traffic	1,297 × 0·15 = 194	115 × 0·3472=40
	11. *Traffic in 1960/61* .	1,297 + 194 = 1,491	115 + 40 = 155
3rd Plan	12. % increase in N.I. in Third Plan .	28	28
	13. Corresponding % increase in traffic. .	$\frac{28 \cdot 0}{24 \cdot 8} \times 15 = 17$	28 × 1·4= 39·2
	14. Increase in traffic .	1,491 × 0·17=253	155 × 0·398 = 61
	15. *Traffic in 1965/66* .	1,491 + 253 = 1,744	155 + 61 = 216

NOTE.—There being no increase in railway passenger traffic during the First Plan the increase in the Second Plan has been based on what has been provided *i.e.*, 15%. However, this is insufficient in practice since the traffic in 1957/58 was 1,431 million *i.e.*, only 60 million less than that estimated for 1960/61 on the basis of 15% for the Second Plan.

ANNEXURE III

TARGETS OF PRODUCTION OF DIFFERENT TYPES OF VEHICLES FOR THE THIRD FIVE YEAR PLAN

The criteria for determining the targets of production of different types of automobiles would obviously be the demand in the country, but in the past targets worked out on this basis have had to be reduced on account of the limiting factor of the availability of foreign exchange. For the purpose of this inquiry, we have refrained from taking note of the position relating to availability of foreign exchange and have confined our efforts to finding out the actual requirements of trade and industry as the Third Plan is projected.

The demand for automobiles arises from two sources—replacement demand which is relatively easy to estimate and new or net demand the estimate of which is beset with many difficulties and must, in the circumstances, be conjectural to an extent.

In its 1956 report, the Tariff Commission had indicated about 8 per cent replacement per annum for motor cars on the basis of a 12-year life and about 10 per cent replacement per annum for commercial vehicles on the basis of a 10-year life. The report, however, mentioned that in actual practice replacements did not work out to these percentages. There is no reliable data to indicate the vehicles actually scrapped from year to year, but in USA where such data was collected, it has been found that the vehicles scrapped during the period of 10 years from 1947 to 1956 worked out to 6·8 per cent per annum in the case of cars and 6·2 per cent per annum in the case of trucks in each year. Conditions for replacement of vehicles in this country are far less favourable than those in the USA and we, therefore, feel that it would be quite safe to estimate the average weightage at about 5 per cent annually in respect of all types of vehicles. On a careful study of vehicles on the road from year to year and the availability of new vehicles and on a comparison of the observed behaviour of automobile users in this country and elsewhere, we are satisfied that replacement once in 20 years is much nearer the average reality than any higher ratio.

As regards the new demand, there can be no absolutely correct yardstick to determine what will be the requirements in 1961—65. Growth of population, expansion of agriculture and industry and increase in the national wealth are, however, important factors which can indicate the requirements in the coming years. We have taken all these factors into consideration and have in addition studied the increase in transport vehicles since the First Five Year Plan and the extent to which it has been able to meet the demand. Our conclusions are not based on any one individual factor. We have tried to take a synthesis of all the factors in order to arrive at estimates which, in our opinion, are very near the actual requirements.

To begin with, we have collected the figures for the three main types of vehicles—*i.e.* jeeps and cars, passenger vehicles and goods vehicles—that were operating in the country in 1950-51 and 1955-56. We have then projected this increase during the First Five Year Plan on a *pro rata* basis to arrive at the figures for 1960-61 and 1965-66 as will be seen in the table below:—

TABLE 1

	Jeeps and Cars	Passenger Vehicles	Goods Vehicles
1950-51	159,263	34,411	81,888
1955-56	203,184	46,461	119,097
Increase during the 1st Plan	43,911	12,050	37,209
1960-61	247,105	58,511	156,306
1965-66	291,026	70,561	193,515

Comparing the *pro rata* increase in automobiles of different types to the figures of actual production (the figures for 1959-60 and 1960-61 are, however, not actuals but estimates), we find the picture as follows:—

TABLE 2

Existing number of vehicles in 1956-1957.

		Cars, Jeeps, Cabs	Passenger buses	Goods Vehicles
Production	1956-57	219,237	44,500	124,628
	1957-58	15,000	4,000	12,000
	1958-59	17,000	5,000	15,000
	1959-60	20,000	7,000	20,000
	1960-61	20,000	7,000	25,000
		72,000	23,000	72,000
Addition 5% mortality in 4 years		10,000×4	2,000×4	6,000×4
Total mortality will be		=40,000	=8,000	=24,000
Net addition during 4 years		32,000	15,000	48,000
Total No. of vehicles in 1960-61 Approx.		252,000	60,000	173,000

It will be seen that as a result of the addition due to actual production the figures for all the three types of vehicles for the year 1960-61 are higher than those worked out on *pro rata* basis. This is understandable because the pace of industrialisation in the Second Plan is much faster than that in the First Plan and also because the targets of production of vehicles were initially kept rather low. The fact that in spite of higher production targets during the Second Five Year Plan there will be a considerable unmet demand for vehicles proves this. The *pro rata* basis of calculation is, therefore, not a reliable indication of the demand during the Third Five Year Plan; neither is the actual production the correct basis to assess the requirements during the Third 5-year Plan because for one reason the Third Plan is much more ambitious than the Second Plan and for another the consumers' preference for road transport indicates a rising trend. Actual production figures, however give us an idea of how the manufacturing programme can be limited as a result of the scarcity of foreign exchange.

A more reliable basis of assessing the demand of different types of vehicles during the Third Five Year Plan would be the projected increase in national income. The table below will show the requirements of different types of vehicles during 1960-61 on the basis of increase in national income:—

TABLE 3

			Jeeps, Cars and Cabs	Passenger Vehicles	Goods Vehicles
	1950-51		159,263	34,411	81,888
	1955-56		203,184	46,461	119,097
Increase in the number of Vehicles during 1st Plan.			*43,921*	*12,050*	*37,209*
National Income	1950-51	9,110	Increase in 1st Plan		
	1955-56	10,800	$\frac{1.690}{1.690} \times 2680 = 1.5858$		
	1960-61	13,480	Increase in 2nd Plan		2,680

Increase in the number of vehicles in 2nd Plan.	43,921 × 1·5858 = 69,650	12,050 × 1·5858 = 19,109	37,209 × 1·5858 = 59,005
Number of vehicles in 1960-61 .	203,184+69,650 = 272,834	46,461+19,109 = 65,570	119,097+59,006 = 178,103

National Income

1960-61 . .	13,480	Increase in 3rd Plan 3,780	$\frac{3,780}{1,690}$ =2·2367
1965-66 . .	17,260		
Increase in the number of vehicles in 3rd Plan .	43,921 × 2·2367 = 98,238	12,050 × 2·2367 = 26,952	37,209 × 2,2367 = 83,225
Number of vehicles in 1965-66 .	272,834—98238 = 371,072	65,570—26,952 = 92,552	178,103—83,225 = 261,328

	Jeeps, Cars and Cabs	Passenger Vehicles	Goods Vehicles
1950-51	159,263	34,411	81,888
1955-56	203,184	46,461	119,097
1960-61	272,834	65,570	178,103
1965-66	371,072	92,522	261,328

On a comparison of the figures for 1960-61 in table No. 2 and table No. 3, it will be seen that the difference between the two calculations is not very wide. On a conservative estimate this difference can be said to indicate the unmet demand.

We feel that it will be quite satisfactory to accept the national income basis for the projected demand for jeeps and cars for the year 1965-66, but for passenger and goods vehicles certain other tests may have to be applied. For instance, it is well-known that industrialisation leads to urbanisation and better methods of farming lead to prosperity of the rural population. Both these factors in turn contribute to a greater travelling habit. The increase in the number of cars not being sufficiently in proportion with the increase in population, people will have to depend more and more on public transport for travelling. A larger number of passenger vehicles would, therefore, be needed than what we have calculated on the basis of national income. This is all the more necessary because the railways have been planning for only 15 per cent increase in traffic and even when that target is achieved the overcrowding in trains is becoming worse than it was before. The shortfall in railway capacity, therefore, has to be catered for by road transport. In the circumstances, it would not be wrong to add another 10 per cent at least to the requirements for passenger vehicles in 1965-66.

On the other hand, the increase in goods road transport has to be related to some extent to the traffic likely to be generated during the Third Plan. The table below gives the additional total traffic during the Third Five Year

Plan as well as the traffic generated upto the end of the Second Plan and accordingly the number of goods vehicles that would be required in 1965-66:—

TABLE 4

Generation of additional long distance traffic in the Third Five Year Plan	Million tons
Coal	40
Iron and Steel	2
Cement	7
Iron Ore	3
Lime Stone	3
Miscellaneous	45
TOTAL	100
Long distance traffic by 1960-61	180 million tons
Addition of 100 million tons by 1965-66	100 million tons
TOTAL	280 million tons
In 1951 for 90 million, number of trucks for feeder and local transport	81,888
1955-56 for 120 million, number of trucks for feeder and local transport	119,097
1960-61 for 180 million number of trucks for feeder and local tranport	193,515
1965-66 for 280 million number of truck for feeder and local transport	317,545
	about 3·25 lakhs
25,000 trucks to replace bullock carts share in rural sector	25,000
TOTAL (1965-66)	3·5 lakhs

The difference between the requirements of goods vehicles worked out on this basis and that worked out on the basis of national income is nearly 90,000. This difference is, no doubt, substantial and even if on a conservative basis we add 50 per cent of it to the requirement of vehicles on the basis of national income, we will need a little over 3 lakhs of goods vehicles in 1965-66. We are making this reduction on account of the uncertainty of foreign exchange being available to the full extent as also on account of the possible increase in the carrying capacity by the railways as a result of more efficient operation.

On the basis of the analysis made above, we feel that the total number of vehicles on road in 1960-61 and 1965-66 should be in the following order:—

	Jeeps, Cars and Cabs	Passenger Vehicles	Goods Vehicles
1960-61	270,000	65,000	180,000
1965-66	370,000	100,000	300,000

This means that the additional number of vehicles to be produced during the Third Five Year Plan period should be

Jeeps, Cars and Cabs . .	100,000
Passenger Vehicles . . .	35,000
Goods Vehicles . . .	120,000

In addition, about 80,000 cars and jeeps, 20,000 passenger buses and 60,000 trucks have to be produced during the third Five Year Plan to meet the wastage. Thus in all the total automobile production during 1961—66 comes to—

	During 3rd Plan 1961—66	Average per year
Cars and Jeeps	180,000	35,000
Passenger buses	55,000	11,000
Trucks	180,000	36,000

At present the production of jeeps is slightly less than half that of cars. Further, about 80 per cent of the cars produced have been of the light and medium variety *i.e.*, Baby Hindustan, Fiat 1100, Standard 10 and Hindustan Ambassador. Standard Vanguard and big American cars accounted for the balance. With the suspension of the programme for the production of Standard Vanguard and big American cars, the demand for them will have to be diverted to medium cars, but that may not be quite satisfactory. We therefore feel that according to the present trend the production structure of the different types of cars, jeeps etc. of an average representative year during the Third Plan (break-up of 36,000) should be as follows:—

Cars	Light . . .	15,000
	Medium . . .	10,000
	Station Wagons and Delivery Vans	1,000
	Heavy	2,000
Jeeps		8,000

We have deliberately kept the demand for heavy cars at a low figure because we feel that these cars cannot be produced economically within the country and we have to cater for only very urgent requirements either by means of import of c.k.d. packs or by developing a single unit like Standard Vanguard in the manufacture of which certain progress has already been made. We feel that there will be need to ration the supply of large cars and allow the balance of the demand to be diverted to medium type cars.

As regards the production of buses, one can hardly overlook the increasing demand for heavy buses during recent years. A study of the past trend of production of heavy buses will show a steady rise from 12 per cent in 1956 to about 20 per cent in 1958. Presuming that the same trend will continue the production requirement of 11,000 buses can be broadly subdivided as follows:—

	Average representative year during Third Plan
Medium	7,000
Heavy	4,000
TOTAL	11,000

Similarly the break up of production of trucks for an average year during Third Plan of various capacity groups can be put as

1 ton truck . . .	1,500
3—5 ,, ,, . . .	32,000
5 ,, ,, and above .	2,500
	36,000

It need hardly be mentioned that the above calculation is based on the presumption that there will be about 270,000 cars and jeeps, 65,000 buses and 180,000 trucks by the end of the Second Five Year Plan. In case of any shortfall, the production of automobiles during the Third Plan has obviously to be stepped up accordingly to meet the deficit.

Increase in the demand, and consequently the production, of Commercial vehicles may also occur in case the inhibitory factors in the development of road transport are eliminated as a result of the report of the Neogy Committee. Similarly, if a decision is taken to introduce a cheap small car the total figure of production of cars may have to be revised upwards.

A further break-up of the production of vehicles of the different types during the years of the Third Five Year Plan has also been attempted in the table below, but it depends very much on the manufacturers whether they will be able to follow this pattern:—

Year	Cars	Jeeps	Buses	Trucks
1961-62	20,000	6,000	8,000	30,000
1962-63	25,000	7,000	9,000	35,000
1963-64	25,000	7,000	11,000	35,000
1964-65	35,000	8,000	13,000	40,000
1965-66	40,000	8,000	14,000	45,000
	145,000	36,000	55,000	185,000

ANNEXURE 'A'

Required production during Third Five Year Plan—Automobiles

	Basis	No. of vehicles 1960-61	No. of vehicles 1965-66	Increase Col. 4— Col. 3—	Average No. of vehicles during 3rd Plan (Col. 3— Col. 4)	Death at 5%	Death during 5 years period 3rd Plan	Total required production Col. 5— Col. 8	Average Annual production (app.)	Remarks
1	2	3	4	5	6	7	8	9	10	11
Passenger cars .	Pro rata . . .	247,105	291,026	43,921	269,065	13,453	67,265	111,186	22,000	
	National Income .	272,834	371,072	98,238	321,953	16,098	80,490	178,728	36,000	L 15,000 M 10,000 SW 1,000 H 2,000
	Final . . .	270,000	370,000	100,000	320,000	16,000	80,000	180,000	36,000	J 8,000
Passenger Buses .	Pro rata. . .	58,511	70,561	12,050	64,536	3,227	16,135	28,185	5,500	
	National Income .	65,570	92,522	26,952	79,046	3,952	19,760	46,712	9,000	
	Final . . .	65,000	100,000	35,000	82,500	4,125	20,625	55,625	11,000	M 7,000 H 4,000
Trucks . . .	Pro rata. . .	156,306	193,515	37,209	174,910	8,746	43,730	80,939	16,000	
	National Income .	178,103	261,323	83,225	219,716	10,986	54,930	138,155	27,500	
	Final . . .	180,000	300,000	120,000	240,000	12,000	60,000	180,000	36,000	L 15,000 M 10,000 SW 1,000 H 2,000
	Production basis .	193,515	350,000	156,485	271,758	13,588	67,940	294,425	45,000	J 8,000

ANNEXURE IV

The demand during the III Five Year Plan and the investment necessary during that period to achieve the production equal to the demand as estimated by the Development Council for Automobile, Automobile Ancillaries and Transport Vehicle Industries:

Relevant extracts of the report of the sub-committee (on the Study of Demand and Capacity for the production of important and Special Compopents for the Automobile Industry) on the issue of demand during the III Plan and approved by the main Council are reproduced below:

"Final Report on Estimated Demand and Capital Required to ensure that the demand may be met.

For ready reference of the Development Council the statement of demand which the committee considers will arise by the end of the Third Five Year Plan period is attached. This represents the final view of the sub-committee.

* * * * *

All present agreed for the purposes of estimating the total capital required by the industry including automobile manufacturers, engine manufacturers and ancillary manufacturers including coach builders, it could be taken that if the turnover of the automobile manufacturers was 'X' then the block capital required by the automobile manufacturers would be '4X' and by the ancillary industries would be '12X'. On the basis of the minimum turnover by the automobile manufacturers included in the Interim Report submitted to the Council, it was agreed that taking the turnover including spare parts to be Rs. 250 crores, the total block capital required to achieve the estimated demand would be Rs. 100 crores for the automobile manufacturers and in addition Rs. 30 crores for the ancillary manufacturers, a total of Rs. 130 crores.

* * * * *

It was unanimously agreed that the present investment being approximately Rs. 30 crores an additional sum of Rs. 100 crores would have to be found of which Rs. 30 crores would be represented by land and building leaving Rs. 70 crores for machinery. It was accepted that we might hope to obtain Rs. 20 crores from indigenous manufacturers of machinery leaving a sum of Rs. 50 crores representing landed cost of plant and machinery which would have to be imported. Assuming the cost of import duty, landing charges and internal freight might represent from 10 to 15 per cent on the c.i.f. value, then foreign exchange from Rs. 43 to 45 crores would have to be provided if the industry is to meet the demand indicated in the estimates accepted by the sub-commitee.

* * * * *

The sub-commitee was of the unanimous view that in order to achieve the total turnover, which if the estimate is correct will not be less than Rs. 250 crores per annum, the automobile industry will require not less than Rs. 43 crores in foreign exchange for the import of machinery and in addition not less than Rs. 57 crores will be required for land and buildings and for machinery produced in India."

For achieving the higher limits of the demand indicated in 1966 a further 20 per cent increase in investments would have to be added. However these estimates were exclusive of investments for forging and foundry capacities which would have to be created. Investments on machinery on these would be of the order of Rs. 10 crores for foundry and Rs. 10 crores for forge; the foreign exchange element on the above investments would be of the order of 12 to 13 crores for the foundry and forge put together.

Demand for Automobiles:

Estimates of the demand for motor vehicles have been various, but they may be summarised by assuming that minimum demands in 1961 and 1966 respectively will be as shown in the table below. For comparison probable

production figures for 1959 and the Tariff Commission's estimates, made in 1959 or production in 1961 are given:

Type of vehicle	Manufacturer	Probable production in 1959	Probable demand in		Tariff Commission Estimate for 1961
			1961	1966	
		Nos.	Nos.	Nos.	Nos.
Cars . . .	Premiers .	4,000			
	Hindustan . .	5,000			
	Standard . .	1,500			
		10,500	20,000 to 24,000	40,000 to 45,000*	20,000
Trucks and Buses .	Telco . . .	8,000			
	Premier . .	4,800			
	Hindustan . .	4,000			
	Ashok Leyland .	1,400			
		18,200	30,000	60,000 to 75,000	40,000
eeps	Mahindra .	5,500	6,000	9,000 to 10,000	5,000
Motor Cycles and Scooters.	..	8,000†	20,000 to 24,000	40,000 to 50,000	..
Three Wheelers .	..		4,000 to 5,000	8,000 to 10,000	..

*If a small car is introduced into the automobile industry's manufacturing programmes, or any other development results in some appreciable price reduction, the demand would probably increase to 60,000 Nos.

†This figure includes the production of three-wheelers for 1959.

N. B.—The above estimates do not include the Defence requirements.

2. Assuming the production figures given for 1966 are accurate the total turnover of the industry involved in making automotive vehicles, and not including ancillary industries will be as below:—

Minimum turnover	*Quantity*	*Approximate value*	*Total*
Cars	40,000	Rs. 10,000	Rs. 40 crores
Trucks and Buses .	60,000	Rs. 25,000	Rs. 150 ,,
Jeeps	9,000	Rs. 10,000	Rs. 9 ,,
Motor cycles and Scooters	40,000	Rs. 2,000	Rs. 8 ,,
Three-Wheelers . .	8,000	Rs. 4,000	Rs. 8·2 ,,
		TOTAL .	210·2 crores

Maximum turnover	*Quantity*	*Approximrte value*		*Total*
Cars	45,000	Rs. 10,000	45	crores
Trucks and Buses .	75,000	Rs. 25,000	187·5	,,
Jeep	10,000	Rs. 10,000	10	,,
Motor Cycle and Scooters	50,000	Rs. 2,000	10	,,
3 Wheelers . . .	10,000	Rs. 4,000	4	,,
		TOTAL	256·5	crores

ANNEXURE V

OBSERVATIONS BY THE CHIEF COST ACCOUNTS OFFICER

As already observed by the Tariff Commission in its 1956 Inquiry, none of the units mentioned above, except Simpsons, has detailed cost accounts to determine the actual cost of production of the various components and/or sub-assemblies. The costing problem has become particularly acute at present in view of the further advances made by some of the units in their indigenous manufacture.

(a) **Hindustan Motors:** This company does not maintain any cost accounts. Adequate production and statistical data are maintained, but these are not co-ordinated to enable the cost of production of the vehicles to be easily determined. Although Standard Labour Hours for the various components manufactured in the machine shop are available, no reconciliation is made between the actual and standard hours. Standard specifications of material are available only for the assembly shop. Even the standard consumptions of materials for the various jobs in the machine shop are not available. The Cost Accounts Officer had, therefore, to depend on the standard hours for the various components and sub-assemblies and the overall consumption of material in the machine shop to work out the cost of production of the different vehicles. Sufficient data is maintained only in respect of the forge and foundry sections.

(b) **Premier Automobiles:** This company maintains cost data showing the direct wages and material for the various components manufactured as well as assembling of the different models of vehicles. The wages are based on the average pre-determined rates for each shop. The materials are priced at the maximum purchase rate of the stock-in-balance. No priced store ledgers maintained. Since issues are priced at the higher purchased rate of the stock-in-balance instead of the weighted average rate, the material costs of the components are always inflated. This over-recovery is not adjusted even at the year end. Overheads are recovered at the pre-determined rates, as a percentage on direct labour. No reconciliation is made between the cost and financial accounts.

(c) **Standard Motor Products of India Ltd.:** No regular system of cost accounting has so far been introduced in this company. But, however, quantitative consumption of materials, and, labour hours for each of the job orders are available. These are not converted in terms of monetary value to ascertain the cost of different jobs.

(d) **Ashok Leyland:** This company has no system of cost accounting. But, however, control on material is effected by comparing the actual consumption with the overseas standard material specifications.

(e) **Telco:** This company does not maintain proper system of cost accounts. Direct materials are drawn based on the standard bill of materials. No priced store ledger is maintained. Expenses are not departmentalised. The company has a schedule of standard man-hours for manufacture/sub-assembly/final assembly for each group of component, but actual man-hours spent on jobs are not booked against the various components to ascertain the variation between the actual and the standard man-hours. It is, however, understood that periodical tests are made to study the variation between the standard and actual time.

(f) **Mahindra & Mahindra:** Although a comprehensive system is being followed by this company, it is based on the pre-determined standards both for material and labour. The actual time taken for the manufacture is recorded and valued at pre-determined rates. The overall cost is compared with the pre-determined standard to judge the variations. As the company adopts hourly rates for labour and overheads for each cost centre, it would not be difficult for them to determine the actual cost of individual components/sub-assemblies/final assembly.

(g) **Automobile Products of India Ltd.**: This company has no system at present but promised to instal a system shortly.

Although the Tariff Commission, in its 1956 report, recommended that the manufacturers should maintain cost data in sufficient detail (to enable the cost of production of components, individual assemblies and final assemblies to be easily ascertained), the manufacturers have not appreciated the importance of costing and taken any steps to implement the Commission's recommendations.

APPENDIX I

List of firms or bodies or individuals to whom the Committee's Questionnaires were issued and from whom replies or memoranda were received

(*Indicates those who sent replies or memoranda.)

A. MANUFACTURERS OF AUTOMOBILES

*1. The Tata Locomotive & Engineering Co. Ltd.,
(Automobiles Division),
Bombay House,
Bruce Street,
Bombay—1.

*2. The Premier Automobiles Ltd.,
Agra Road,
Kurla,
Bombay—37.

*3. M/s. Hindustan Motors Ltd.,
8, Royal Exchange Place,
Calcutta—1.

*4. M/s. Ashok Leyland Ltd.,
Bank of Mysore Building, N.S.C. Bose Road,
Madras—1.

*5. M/s. Mahindra & Mahindra Ltd.,
Gateway Building,
Apollo Bunder,
Bombay—1.

*6. The Standard Motor Products of India Ltd.
29, Mount Road,
Madras—2.

B. MANUFACTURERS OF ENGINES

*1. M/s. Simpson & Co. Ltd.,
Mount Road,
Madras—2.

*2. The Automobile Products of India Ltd.,
Agra Road,
Bhandup,
Bombay—40.

*3. M/s. Ashok Leyland Ltd.,
Bank of Mysore Building, N.S.C. Bose Road,
Madras—1.

B. MANUFACTURERS OF ENGINES (*Contd.*)

*4. The Tata Locomotive & Engineering Co. Ltd.,
(Automobiles Division),
Bombay House,
Bruce Street,
Bombay—1.

*5. M/s. Enfield (India) Ltd.,
36-C, Mount Road,
Madras.

*6. M/s. Bachraj Trading Corporation Ltd.,
134, Dr. Annie Besant Road,
Worli,
Bombay—18.

C. MANUFACTURERS OF THREE WHEELERS

*1. The Automobile Products of India Ltd.,
Agra Road,
Bhandup,
Bombay—40.

*2. M/s. Enfield India Ltd
36-C, Mount Road,
Madras.

*3. M/s. Bachraj Trading Corporation Ltd.,
134, Dr. Annie Besant Road,
Worli,
Bombay—18.

D. MANUFACTUERERS OF AUTOMOBILE ANCILLARY ITEMS

*1. M/s. Motor Industries Co. Ltd.,
Post Box No. 93,
Bangalore.

2. M/s. India Radiators Ltd.,
6, Armenian Street,
Madras.

3. M/s. Hydraulics Private Ltd.,
29, Mount Road,
Madras—2.

4. M/s. Union Co. (Accessories) Ltd.,
29, Mount Road,
Madras.

5. M/s. Best & Co. Ltd.,
P.B. No. 63,
Madras.

*6. M/s. India Pistons Ltd..
Hazur Gardens,
Sembiam,
Madras.

D. MANUFACTURERS OF AUTOMOBILE ANCILLARY ITEMS (*Contd.*)

*7. M/s. Engine Valves Ltd.,
5, Patullos Road,
Mount Road,
Madras—2.

*8. M/s. Automobile Products of India Ltd.,
Bhandup,
Bombay.

*9. M/s. Asbestos, Magnesia & Friction Materials Ltd.,
Ghatkopar,
Bombay—39.

*10. M/s. Malleable Iron & Steel Castings Co. Ltd.,
Mathurdas Mill Compound,
Parel, Bombay.

11. M/s. Payen-Talbros Ltd.,
71/3, Nazafgarh Industrial Area,
New Delhi—15.

*12. M/s. Associated Accessories Private Ltd.,
20, Mangoe Lane,
Calcutta—1.

*13. M/s. Goetze (India) Ltd.,
Pratap Building,
Connaught Circus,
New Delhi.

*14. M/s. Auto Accessories (India) Ltd.,
Near Halav Bridge,
Old Kurla,
Bombay.

*15. M/s. John Fowler (India) Ltd.,
Marshalls Building,
Ballard Road,
P. Box No. 654,
Bombay—1.

16. M/s. H. J. Leach & Co. Ltd.,
Asian Building,
Nicol Road,
Ballard Estate,
Bombay.

17. M/s. Fuel Injections Ltd.,
43, Forbes Street,
Fort, Bombay.

18. M/s. Hind Equipment Corporation,
24-B, Hamam Street, 4th Floor,
Raja Bahadur Compound,
Bombay—1.

19. M/s. Acme Manufacturing Co. Ltd.,
Construction House,
Ballard Estate,
Bombay—1.

D. MANUFACTURERS OF AUTOMOBILE ANCILLARY ITEMS (*Contd.*)

20. M/s. Kirloskar Oil Engines Ltd.,
Kirkee.
Poona.

*21. M/s. Usha Automobile & Engineering Co. Ltd.,
63/2, Belgachia Road,
Calcutta—37.

*22. M/s. Chloride & Exide Batteries (Eastern) Ltd.,
59-C, Chowringhee Road,
Calcutta.

*23. M/s. Standard Batteries Ltd.,
Bombay.

*24. M/s. Metropolitan Spring Ltd.,
Antop Hill, West,
Wadala,
Bombay—31.

25. M/s. Addison Paints & Chemicals Ltd.,
Madras.

26. M/s. Mahindra Owen Ltd.,
Gateway Building,
Apollo Bunder,
Bombay.

27. M/s. Dunlop Rubber Co. (India) Ltd.,
57-B, Free School Street,
Calcutta.

28. M/s. Hoare Miller & Co. Ltd.,
5, Fairlie Place,
Calcutta.

*29. M/s. National Bearing Co. Ltd.,
Jaipur.

*30. M/s. Canara Workshops Ltd.,
P.B. No. 12,
Mangalore—3.

31. M/s. Amco Ltd.,
Mysore Road,
Bangalore—2.

32. M/s. Bhor Industries Ltd.,
Bombay.

*33. M/s. Pradip Lamp Works,
45, Armenian Street,
Calcutta.

34. M/s. Radio & Electrical Mfg. Co.,
Bangalore.

D. MANUFACTURERS OF AUTOMOBILE ANCILLARY ITEMS (*Contd.*)

*35. M/s. National Rubber Mfrs. Private Ltd.,
Leslie House,
Chowringhee,
Calcutta.

36. M/s. Pioneer Rubber Mills (Bombay) Ltd.,
Agra Road,
Bhandup,
Bombay.

*37. M/s. Dharampur Leather Cloth Co..
10, Chowpatty Sea Face,
Bombay.

38. M/s. Hindustan Rubber Works Ltd.,
14, Ballygunj, Station Road,
Calcutta.

39. The Association of Rubber Mfrs. in India,
Calcutta.

40. M/s. Imperial Chemical Industries Ltd.,
Calcutta.

41. M/s. Hind Electric Lamp Private Ltd.,
Shikohabad.

42. M/s. Indo Belga Engg. Co. Ltd.,
Ahmedabad.

*43. M/s. Sanghavi & Co.,
109, Love Lane,
Mazgaon,
Bombay—10.

44. M/s. Oriental General Industries Ltd.,
6, Ghore Bibi Lane, Narkeldanga.
Calcutta.

*45. M/s. National Radiators,
20, Mangoe Lane,
Calcutta.

46. M/s. Swastik Rubber Products Ltd.,
Opp. Kirkee Rly. Station,
Kirkee, Poona.

*47. M/s. New Beamco Engg. Products Ltd
Belgaum.

48. M/s. Upper India Trading Co. Ltd.,
Mount Road.
Madras.
485. Sandhurst Road.
Bombay.

49. M/s. Veera Industries of India Ltd.,

D. MANUFACTURERS OF AUTOMOBILE ANCILLARY ITEMS (Concld.)

50. M/s. Summermal Bansilal,
Rangamahal,
Ajmer.

51. M/s. Guest, Keen, Williams Ltd.,
41, Chowringhee,
Calcutta—10.

*52. M/s. Premier Automobiles Ltd., (for Axles)
Agra Road, Kurla,
Bombay.

53. M/s. Hindustan Industries & Machinery Mfg. Co. Ltd.,
Konia,
Kashi.

*54. M/s. Himco India Ltd.,
542, Sandhurst Bridge,
Bombay—7.

*55. M/s. Modak Rubber Products Ltd.,
Verma's Building, Golanjee Hill Road,
Sewree,
Bombay.

56. Automobile & Agricultural Industries Corporation,
Bombay.

57. Automotive Manufacturers Association of India,
India Exchange Place,
Calcutta—1.

58. General Manager,
Manipur State Transport,
Imphal.

E. ASSOCIATIONS

*1. The Secretary,
All India Automobile Association,
New Delhi.

*2. Secretary,
Automobile Association of Upper India,
Lila Ram Building,
Connaught Place,
New Delhi.

*3. The Secretary,
Automobile Operators Union,
New Delhi.

*4. The General Manager,
Orissa Road Transport Services Ltd,
Behrampur.

E. ASSOCIATIONS (*Contd.*)

5. Director of Transport,
Madhya Pradesh,
Nagpur.

*6. Secretary,
Automobile Association of Southern India,
36-A, Mount Road,
Madras.

*7. The Secretary,
Automobile Association of Bengal,
13, Ballygunge Circular Road,
Calcutta.

8. The Secretary,
Indian Institute of Road Transport,
Bombay.

*9. The Secretary,
Indian Road and Transport Development
Association Limited,
27, Bastion Road,
Bombay—1.

10. The Chairman,
State Transports,
Shillong.

*11. Federation of Motor Transport Association,
Mehar Building,
Chowpatti,
Bombay.

*12. Secretary,
Motor Vehicle & Allied Merchants Association,
38-A, Mount Road,
Madras—6.

*13. Secretary,
Automobile Traders Association,
Scindia House,
New Delhi.

*14. The Chairman,
Bombay State Road Transport Corporation,
80/81, Dr. Annie Besant Road,
Worli, Bombay.

15. The Manager,
Kashmir State Transport,
Srinagar.

*16. Bihar State Road Transport Corporation,
Patna (Bihar).

E. ASSOCIATIONS (*Contd.*)

*17. The Secretary,
Saurashtra State Transport Corporation,
Rajkot.

*18. The Director, Transport,
Kerala.

*19. Manager,
Orissa State Transport,
Cuttack.

20. General Manager,
Madhya Bharat Roadways,
Gwalior.

21. General Manager,
Himachal Pradesh Transport Service,
Simla.

22. General Manager, Govt. Transport,
Andhra Pradesh,
Hyderabad.

*23. General Manager,
Mysore Government Transport Dept.,
Bangalore.

24. Honorary Director,
Madras State Transport,
Madras.

25. General Manager,
Punjab Roadways,
Chandigarh.

*26. General Manager,
BEST,
Bombay.

*27. Director-General 1,
West Bengal Transports,
Calcutta.

28. Deputy Transport Commissioner,
Uttar Pradesh,
Lucknow.

29. Transport Manager,
Poona Municipal Transports,
Poona.

*30. Secretary,
Western India Automobile Association,
Bombay.

*31. Secretary, West Bengal Lorry Syndicate,
Calcutta.

E. ASSOCIATIONS (*Concld.*)

*32. Motor Industries Association,
60/3, Dharamtalla Street,
Calcutta.

*33. All India Automobile & Ancillary
Industries Association,
Brabourne Stadium,
87, Veer Nariman Road,
Bombay.

*34. Motor Manufacturers & Industries
Association,
Calcutta.

35. General Manager,
Provincial Transport Service,
Commercial Road, P.B. No. 42,
Nagpur.

*36. The Motor Manufacturers & Importers
Association Limited,
Bank of Baroda Building,
Apollo Street,
Bombay.

F. INDIVIDUALS

*1. Shri K. P. Gopinath,
Consultant to the Indian Project of B.M.W.,
C/o. B.M.W. Aktiengesellschaft,
West Germany.

2. Shri G. Krishnaji,
'Srinivasan',
2, Murthy Lane,
Madras—3.

3. M/s. Vergheese & Co.,
Kunnamkulam,
Kerala.

*4. Dr. Diwan Singh,
President,
United India Association,
10/9, Connaught Circus,
New Delhi.

*5. M/s. Puri Industries,
Yamuna Nagar,
Punjab.

6. M/s. Boman Chothia,
Jahangir Mansion,
1st Marine Lane,
Fort, Bombay

F. INDIVIDUALS (*Contd.*)

*7. M/s. Sen & Pandit Private Ltd.,
Mercantile Building,
Lallbazar,
Calcutta.

*8. Shri Noshirwan Godrej,
Noshirwan & Co. Ltd.,
Maharani Road,
Indore City.

*9. Shri K. C. Lahiri,
70/2, Sindhi Society Chamber,
Bombay—38.

10. Shri N. Daniel Jayasekharan,
Neyyoor, Kanya Kumari Dt.,
South India.

*11. Shri A. Akkaraju,
Kaligiri,
Nellore Dist.,
Andhra State.

*12. Secretary,
Bharat Chamber of Commerce,
State Bank Building, Barrabazar Branch,
Calcutta—7.

13. Mr. Cherian V. Southil,
Kerala.

*14. Ford Motor Co. of Canada,
Singapore.

*15. International Industries & Trading
Corporation,
1.H.90, Murari Pukhur Road,
Calcutta.

16. M/s. Simac Group (India) Private Ltd.,
Mehar House,
15, Cowasji Patel Street,
Fort, Bombay.

17. M/s. Simpson & Co. Ltd.,
202/203, Mount Road,
Madras.

*18. M/s. Premnath Motors Private Ltd.,
Scindia House,
New Delhi.

*19. M/s. Mohanwi Corporation Private Ltd.,
Post Box No. 1595,
31, Faiz Bazar,
Delhi—7.

F. INDIVIDUALS (*Concld.*)

*20. Shri P. M. Reddy,
5/C, Ulsoor Road,
Bangalore (Mysore State) } M/s. Hindustan Aircraft Private Ltd., Bangalore.

*21. M/s. Associated Corporation of Industries,
Bombay.

22. Shri Niranjan Ghosh,
Kalloo Mal Building,
Bela Road,
Delhi—6.

23. Shri M. P. Sud,
Pavri Bungalow,
Ghodbunder,
Santa Cruz,
Bombay.

24. Shri P. A. Paul,
Augustine Motors,
Mundakayam, P.O.,
Kerala State.

25. Shri Kanwar Sen,
44, Ramnagar,
New Delhi.

26. Chief Editor,
Transporters Gazette Weekly,
27/27, Shakti Nagar,
Delhi—6.

27. M/s. Shree Pawan Kumar Co. Ltd.,
18, Mangoe Lane,
Calcutta—1.

*28. M/s. Citroen,
Paris.

*29. Shri Murarji J. Vaidya,
Jadavji Mansion,
Cuffee Pardade,
Bombay.

APPENDIX II

SECTION I

List of persons who attended the discussions with the Committee in connection with the manufacture of the Motor Car.

Name of the firm	Name of the Representative
M/s. Mahindra & Mahindra, Ltd.	Shri K. C. Mahindra. Shri Keshub Mahindra. Mr. Kermaol. Mr. Fraiffe. Shri S. K. Swaminadhan. Shri I. Chatterjee. Shri B. R. Sule.
M/s. Premier Automobiles, Limited	Shri Lalchand Hirachand. Shri D. C. Patel.
M/s. Bachhraj Trading Corporation, Private, Limited.	Shri N. K. Firodia. Shri H. K. Firodia. Mr. Krichner. Shri G. C. Choudhry.
M/s. Shri Noshirwan Godrej, Indore City	Shri Noshirwan Godrej.
M/s. Engg. Projects Private, Limited	Shri K. K. Roy.
M/s. Hindustan Aircraft, Limited	Shri P. M. Reddy.
M/s. B. M. W., Germany M/s. United Provinces Commercial Corpn. Ltd. & M/s. Premnath Motors)	Shri R. Mahadevan. Shri Bhalla S. R. Shri Premnath. Shri K. M. Menon
Shri Murarji J. Vaidya	Shri Murarji J. Viadya. Shri R. Balan.
M/s. Aeronautical Services Private, Ltd.	Shri K. K. Roy.
M/s. Puri Industries	Shri Y. S. Puri.
M/s. Associated Corporation of Industries (India), Ltd.	Shri Mascharenes.
M/s. Hindustan Motors, Limited	Shri B. M. Birla. Shri C. C. Desai. Shri K. D. Churiwala. Shri S. L. Jhunjunwala.
M/s. Standard Motor Products of India, Limited.	Shri K. Goplakrishna.
Dr. Diwan Singh	Dr. Diwan Singh. Shri Ragbir Singh.

SECTION II

List of representatives of Associations and Organisations connected with the Automobile Industry who attended the discussions with the Committee.

Name of the Association/ Organisation	Name of the Rrepresentative
West Bengal State Transports. . .	Shri J. N. Talukdar, I.C.S. Shri P. S. Mukerjee. Shri M. K. Mukerjee.
U. P. Transports	Shri R. L. Rather.
Manipur State Transport, Imphal .	Shri R. L. Sethi.
Delhi Transport Undertaking . . .	Lt. Col. R. S. Sahney. Shri S. V. Sriramulu. Shri P. K. J. Menon.
B. E. S. T.	Shri M. R. Ananthanarayan.
Transport Controller, Orissa . . .	Col. S. R. Ray.
Madhya Bharat Roadways, Gwalior .	Col. S. C. Ghosal.
Automobile Association of India . .	Shri S. Sobti. Shri P. S. Chauhan. Shri H. C. Kuhiij.
Automobile Association of Upper India .	Shri Ram Dass.
Western India Automobile Association .	Shri K. G. Subrahmaniam.
Motor Industries Association, Calcutta .	Shri B. P. Poddar.
Mysore State Govt. Road Transport Deptt.	Shri R. R. S. Ram.
Automobile Traders Association, New Delhi.	Shri K. C. Jain. Shri A. K. Sanghi.
Motor Manufacturers and Importers Association, Ltd., Bombay.	Shri N. K. Limji. Dr. N. M. Rane.
Motor Manufacturers and Importers Association, Ltd., Delhi.	Shri B. S. Bagai. Shri K. N. Talwar.
Motor Industries Association, Calcutta	Shri R. R. Aiyer.
Indian Institute of Road Transport	Shri Sagar Suri. Shri Man Mohan Singh. Shri R. C. Gupta. Shri B. D. Garg. Shri Narinder Singh.
All India Motor Union Congress .	Shri Harbhajan Singh. Shri B. Banerjee. Shri Swaran Singh.
Federation of Motor Transport Association	Shri Chinubahai Kilachand. Shri B. V. Vagh. Dr. J. M. Rane.
Indian Road Transport Development Association.	Dr. F. P. Antia.

APPENDIX III

MANUFACTURING/DEVELOPMENTAL PROGRESS OF ANCILLARY INDUSTRIES

Sl. No.	Items of manufacture	Name of manufacturers	Foreign Collaborator, if any	Year of Commencement of Production	Remarks
1	2	3	4	5	6
1	Pistons	1. India Pistons Pvt. Ltd., Sembiam, Madras.	Associated Engg. Holdings Ltd. U. K. Mahle Komm. W. Germany.	1952	Raw materials only imported.
		2. Escorts (Agents) Pvt. Ltd., Con. Circus, New Delhi.	Mahle Komm. W. Germany.	1960	
		3. Hindustan Motors Ltd., Uttarpara, Calcutta.		Prior to 1954	Raw materials only imported.
2	Piston Rings . . .	1. India Pistons Pvt. Ltd., Sembiam, Madras.	Associated Engg. Holdings Ltd., U. K.	1950	Do.
		2. Goetze (India) Pvt. Ltd., Con. Circus, New Delhi.	Goetzewerke Friedrich, Germany	1957	Do.
3	Gudgeon Pins . . .	1. India Pistons Pvt. Ltd., Sembiam, Madras.	Associated Engg. Holdings Ltd., U. K.	1954	Do.
		2. Escorts (Agents) Pvt. Ltd., Con. Circus, New Delhi.			
4	Cylinder Liners Sleeves. .	1. India Pistons Pvt. Ltd., Sembiam, Madras.	Associated Engg. Holdings Ltd., U. K.	1953	Do.
		2. Goetze (India) Pvt. Ltd., Con. Circus, New Delhi.	Goetzewerke Friedrich, Germany	1957	
		3. Canara Workshops, Ltd., Mangalore.		1960	
		4. Amerind Engg. (P) Ltd., Bombay.	M/s. Ex-Cell-O Corp. USA.	1960/61	
		5. Bilbir Singh & Co. Poona			Scheme under consideration.

1	2	3	4	5	6
5	Valves (Inlet & Exhaust)	1. Acme Manufacturing Co. Ltd. Bombay.	..	1958	Raw mateirals only imported.
		2. Engine Valves Ltd., Madras.	Farnborrough Engg. Co., U.K.	1959	Do.
		3. Veera Industries of India, Bombay.	Fratelli Garrone. Torino (Italy)	1960/61	
		4. Hindustan Motors Ltd., Calcutta.	..	1951	Raw materials only imported.
6	Fuel injection Equipment (Multi-cyl.)	1. Motor Industries Co. Ltd., Bangalore.	Robert Bosch-Germany	1954	Partly from raw materials & Partly from semi-finished components.
7	Oil Filters & Elements	1. H. J. Leach & Co. Pvt. Ltd., Bombay.	..	1958	Raw materials only imported.
		2. John Fowler (I) Ltd., Bombay	John Fowler of U. K.	1957	Do.
8	Carburettor	1. Union Co. (Accessories) Pvt. Ltd., Madras.	Solex Ltd., France	1960/61	
9	Spark Plugs	1. Motor Industries Co., Ltd., Bangalore.	Robert Bosch & Co., Germany.	1953	Raw materials except Insulators—90%
		2. Auto Accessories (I) Pvt. Ltd., Bombay.	Smith Motor Acc. Ltd., U. K.	1955	Do.
10	Gaskets & Packings	1. Payen Talbros Pvt. Ltd., New Delhi.	Engg. Components Ltd., U. K.	1957	Raw materials.
		2. Auto Spares Ltd., Baroda	..	1960	
11	Oil Seals	1. Swastic Rubber Products Ltd., Poona.	Bartonwood Engg. Ltd., U. K.	1960	
		2. Rachmann Koshat-Kinn (Regd.) New Delhi.	..	1950	Raw materials only imported.
		3. Auto Pins (India) Regd., Kashmere Gate, Delhi.	..	1953	
		4. Auto Spares Ltd., Baroda	..	1960	

11A Fuel pump (petrol) . .	1. Union Co. (Accessories) Pvt. Ltd. Madras.	Ste. Annoyyme Pour L' Equipt. Electriane des Vehicles, France.		Scheme under consideration.
	2. Indian Rubber Mfg. Ltd., Calcutta.	..		..
	3. Super Seals Pvt. Ltd., New Delhi.	..	1960	..
	4. Fenner, Cockill, Ltd., Madurai	M/s. J. H. Fenner & Co. (Overseas) Ltd., U. K.	1960	..
12 Thin Wallad Bearings .	1. Kirloskar Oil Engines Ltd., Poona.	Clacier Metal Co.. U.K.	Prior to 1951	Raw Materials only imported.
	2. Upper India Trading Co. Ltd., Madras.	Bracke Gleitlager, Germany	1960	..
	3. Simpson Rep-Co. Pvt. Ltd.. Madras-11.	Clevite Corpn. of America.	1960	..
13 Radiators . . .	1. India Radiators, Ltd., Madras	SKF—Germany	1956	..
	2. National Radiators, Calcutta.	Netherlandese Radiators, Holland.	1960	..
	3. Premier Automobiles Ltd., Bombay.	..	1950	..
	4. Union Co. (Accessories) Pvt. Ltd., Madras.	..	1957	..
	5. Teksons (Pvt.) Ltd., Bombay.	..	1960	..
	6. Universal Radiators, Coimbatore	..	..	Scheme under consideration.
	7. Usha Automobile & Engg. Pvt. Ltd., Calcutta.	..	..	Do.
	8. Mithisons, Private Ltd., Calcutta.	..	..	Do.
14 Clutch Facings . .	1. Asbestos Magnesia & Friction Materials Ltd., Bombay	Turner & Newall Ltd., U.K.	1956	Raw materials only imported.
	2. Auto Supply Co, S. P. Mukerjee Marg, Delhi-6.	Hall & Nielsen Ltd., U. K.	1960	

1	2	3	4	5	6
15	Clutch Plate (Dise) . .	1. Automobile Products of India Ltd., Bombay.	Borg & Beck, U. K.	1957	
		2. Shri T.G.K. Raman, Madras	Small & Parks Ltd., Manchester	..	Scheme under consideration.
16	Clutch Gover, Pressure Plate.	1. Automobile Products of India Ltd., Bombay.	Borg & Beck, U. K.	1955	..
17	Brake Linings . . .	1. Automobile Products of India Ltd., Bombay.	Firestone of U. K.	1956	Raw materials only imported.
		2. Asbests Magnesia & Friction Materials Ltd., Bombay.	Turner & Newall Ltd., U. K.	Do.	Do.
		3. Auto Supply Co., S.P. Mukerjee Marg, Delhi-6.	Hall & Nielsen Ltd., U. K.	1960	..
18	Hydraulic Brake Assys. .	1. Automobile Products of India Ltd., Bombay.	Lockheed of U. K.	1957	..
		2. Amorind Engg. Private Ltd., Bombay.	Ex-Cell-O Corpn., U. S. A.	1960/61	..
19	Hydraulic Brake Tubes .	1. Western Auto Parts Pvt. Ltd., Bombay.	..	..	Scheme under consideration.
19A.	Shock Absorbers .	1. Hydraulics Pte. Ltd., Mt. Road, Madras.	Armstrong Patents Co., U. K.	1956	Raw materials.
		2. Premier Automobiles Ltd., Bombay.	Monroe Auto Equipt. Co., U.S.A.	1956	Do.
		3. Hind Equipment Corpn. (P) Ltd., Bombay.	Jones Woodhead Simms Ltd., U.K.	1960	..
		4. Anand Automobiles, Bomaby.	Gabrial Co., of U.S.A.	..	Scheme under consideration
20	Wheels & Rims .	1. Guest Keen Williams Ltd., Calcutta.	G.K.W. of U. K.	1960	..
		2. TVS Iyengar & Sons Pvt. Ltd., Madurai.	Dunlop Rubber Co. of U. K.	Do.	..

21	Tyre Inflators . . .	1. Union Co. (Accessories) Ltd., Madras.	Prima Industries, U. K.	1952	Raw materials only imported.
		2. Hindustan Industries & Machine Mfg. Co. Ltd., Kashi	..	1950	Do.
		3. Indo Bolga Engg. Co. Ltd., Ahmedabad.	..	1955	Do.
22	Timing Chains . .	1. Modern Trade Coprn., Delhi.	..	..	..
		2. T. I. Cycles of India Ltd., Madras.	Tube Investments U. K.	1960	..
		3. L. G. Varadarajh, Coimbatore.	..	..	Scheme under consideration.
23	Ball Bearings Roller Bearings	1. National Engg. Industries, Jaipur.	Hoffman of U. K.	Prior to 1951	..
		2. Kamla Shankar & Soshi, Rajkot.	..	..	..
		3. Tata Locomotive & Engg. Co., Bombay.	S. K. F.	..	Scheme under consideration.
24	Garage & Service station equipments	1. Precious Die Works, BPT plot, Bombay.	..	Prior to 1951.	
		2. Simpson & Co. Ltd., Madras.	..		
		3. Duston Engg. Corpn., Calcutta.	..		
		4. G.WW. Works, Calcutta.	..		
		5. Hudson Engg. Works, Calcutta.	..		
		6. Pioneer Cutlery Works, Calcutta.	..		
		7. Guest Keen Williams Ltd., Calcutta.	G. K. W. of U. K.		
		8. K. G. Khoshla & Co. Pvt. Ltd., New Delhi.	..	1960	
		9. Associated Traders, Madras.	Pumpenfabrik Urach, West Germany.	..	Scheme under consideration.
		10. T.V.S. Iyenger & Sons Pte. Ltd. Madras.			

1	2	3	4	5	6
15	Jacks	1. New Bemco Engg. Products Pte. Ltd., Bombay.	..	Prior to 1956	Raw materials only imported.
		2. Hindustan Ind. Machine Mfg. Co. Ltd., Kashi.	..		
		3. Acme Manufacturing Co. Ltd., Bombay.	..		
		4. Union Co. (Acc) Pte. Ltd., Madras.	..	1957	Do.
		5. Sharco Industries (P) Ltd., Delhi.	Sparton Michegon, U.S.A.	Do	Do.
		6. Brady Engg. Co. Ltd., Bombay.	Tangyes Ltd., U. K.	1960	
		7. Acme Batteries Pte. Ltd., Delhi-Shahdara.	..	1960	
26	Silencer, Mufflars, Seats, Frames, Tail pipes, Exhaust pipes, Number Plate, Dynamo, Pulley, Door Lock, Remote Control etc.	1. Usha Automobile & Engg. Pte. Ltd., Calcutta.	..	1958	Raw materials only imported.
		2. Unicorn Private Ltd., Madras.	..	1957	Do.
		3. Krishna Nath Engg. Co., Howrah.	..	..	Scheme under consideration.
		4. Premier Automobiles Ltd., Bombay.	..	Prior to 1954	Raw materials only imported.
		5. Auto Pins (India) Regd., Delhi.	..	1953	
		6. Anandji Haridass & Co. Pte. Ltd., Bombay.	..	1960	
27	Brake Drum Assy. . .	1. Acme Manufacturing Co. Ltd., Bombay.	..	1959	100% indigenous
		2. Canara Workshop Ltd., Mangalore.	..	1960	
		3. Standard Motor Products of India Ltd., Madras.	..	1957	100% indigenous

		4. Hindustan Motors Ltd., Calcutta.	..	1955	Do.
		5. Mahindra & Mahindra Ltd., Bombay.	..	1957	Do.
		6. Automobile & Agricultural Industries Corpn. Ltd., Bombay.	..	1960	
28	Hubs	1. Canara Workshop Ltd., Mangalore.	Mond. Nickel & Co. Ltd. U.K.	1960	
		2. Acme Manufacturing Co., Ltd.	..	Prior to 1955	100% indigenous
29	Air Brake Equipment .	1. Manindra Owen Pte. Ltd., Poona.	Rubery Owen & Co. Ltd., U. K.	1959	
		2. Georage Oakes (P) Ltd., Madras	..	1960	Collaboration to be finalised.
30	Fuel Hoses . . .	1. Teksons (Pte.) Ltd., Bombay.	..	1960	
		2. B. Choudhary & Co., Bombay.	..	..	
31	Automotive Propellor Shaft	1. Amerind Engg. (P) Ltd., Bombay.	Ex-Cell-O Corpn., USA.	1960/61	
		2. Premier Automobiles Ltd., Bombay.	..	Prior to 1954	
32	Steering Gear . . .	1. Amerind Engg. (P) Ltd., Bombay.	Ex-Cell-O Corpn. USA.	1960/61	
33	Tie Rod ends . . .	1. Rane (Madras) Ltd., Madras.	Quinton Hazell Ltd., U. K.	1960	
34	Window Regulators & Remote controls.	1. Usha Automobile & Engg. (P) Ltd., Calcutta.	..	1959	
		2. Anandji Haridass & Co. Pvt. Ltd., Bombay.	..	1960	
35	Flexible shafting . .	1. Forbes Forbes Campbell & Co. Ltd., Bombay.	..	1961	
		2. Delhi Auto & General Finance (P) Ltd., New Delhi.	..	..	Under consideration
		3. Allied Motors (P) Ltd., New Delhi.	..	..	Do.

1	2	3	4	5	6
36	Batteries	1. Acme Batteries Ltd., Delhi Shahdara.	..	Prior to 1954.	
		2. Amco Ltd., Chowpatty, Bombay-7.	..		
		3. Associated Battery Makers (E) Ltd., Calcutta.	Exide of U. K.		
		4. Bharat Battery Mfg., Calcutta	..		
		5. Eastern Accumulators Co. Ltd., Calcutta.	..		
		6. Electrical Storage Co. Ltd., Calcutta.	..		
		7. Himco (I) Ltd., Kurla Road, Bombay.	..		
		8. Indian Battery Mfg. Co. Ltd., Calcutta.	..		
		9. Mysore Electro-Chem. Ltd., Bangalore.	..		
		10. Oldham & Sons (I) Ltd., Madras.	..		
		11. Standard Batteries Ltd., Bombay.	Tudor of Sweden		
37	Automobile Bulbs . .	1. Predip Lamp Works, Calcutta.	..	Since 1955/56 100% indigenous	
38		2. Mysore Lamp Works, Bangalore.	..		
		3. Auto Lamps Ltd., Faridabad.	..		
		4. Glass & Miniature Bulb Ind., Kanpur.	..		
		5. Lamina Electric Industries, Bombay-28.	..		
		6. Miniature Bulb Industries, Dehra Dun.	..		
		7. Asia Elect. Lamp Co., 45, DC Mukerjee St., Calcutta.	..		
		8. Hind Lamp Ltd., Shikobabad	..		
		9. Calcutta Electric Lamps, Calcutta.	..		

39	Dynamo	1. Orient General Industries Ltd., Calcutta (for cars only).	Joseph Lucas Ltd., U. K.	1958	50% indigenous
		2. Best & Co. Pte. Ltd., Madras (for cars & trucks).	Simms Motor Units Ltd., U.K.	1960	
40	Electric Horns . . .	1. Union Co. (Acc.) Pte. Ltd., Madras-2.	..	1958	50% indigenous
		2. Himco (I) Pte. Ltd., Bombay.	..	1958	Do.
		3. Sharco Industries (P) Ltd., New Delhi.	Sparten Corpn. Jacksen U.S.A.	1960/61	
		4. Orient General Ind. Ltd., Calcutta.	Joseph Lucas, Ltd. U. K.	1960	
		5. Jullunder Motor Agency Pte. Ltd., Delhi.	West falis-he Metall Industries Gmbh—W. G.	1963	
		6. Delhi Motor Co., Kashmere Gate, Delhi.	..	1956	
		7. Acme Batteries Pte. Ltd., Delhi-Shahdara.	..	1960	
41	Parking, Direction, Stop Light, Head, Side & Tail Lamps & Switches.	1. Shanghavi & Co., Bombay.	..	1955	100% indigenous.
		2. Usha Automobile & Engg. Co. Pte. Ltd., Calcutta.	..	1959	Do.
		3. Racmann Koshit-Kinn (Regd.), New Delhi.	..	1950	
		4. Auto Pins (India) Regd., Kashmere Gate, Delhi.	..	1953	
		5. Anandji Haridass & Co. Pte. Ltd., Bombay.	..	1960	
		6. T. I. Cycles of India Ltd., Madras.	H. Miller & Co. Ltd., U. K.	..	Scheme under consideration.
		7. Orient General Industries Ltd., Calcutta.	Joseph Lucas Ltd., U. K.	..	Scheme under consideration.
		8. Lucas Indian Service Private Ltd., Madras.			Do.
42	Voltage Regulator	1. Best & Co. Pte. Ltd., Madras	Simms Motors Units Ltd., U. K.	1960	

1	2	3	4	5	6
43	Ignition Coils . . .	1. Lucas Indian Service (P) Ltd., Madras.	Joseph Lucus Ltd., U. K.	1960	
44	Distributor Caps, Rotors	Lucas Indian Service (P) Ltd., Madras.	Joseph Lucas Ltd., U. K.	1960	
45	Dash Board Instruments and Tachograph.	1. International Instrument Pte., Ltd., Bangalore.	VDO Tachometer Werke, W. Germany.	1960/61	
		2. Autometers Pte. Ltd., New Delhi.	Motor Meter Stuttgart, West Germany.		Scheme under consideration.
46	Horn Relays . . .	1. Himco (I) Private Ltd., Bombay.	..	1958	
	Horn Rings, etc. .	2. Orient General Industries, Ltd., Calcutta.	Joseph Lucas, Ltd., U. K.	..	Scheme under consideration.
47	Leaf Spring Assys .	1. Metropolitan Springs (P) Ltd., Bombay.	..	In production.	
		2. Canara Workships (P) Ltd., Mangalore.	..		
		3. Premier Automobiles Ltd., Bombay.	..		
		4. Auto Pins (I) Regd., Kashmere Gate, Delhi.	..		
		5. Bombay Motor Trading Co., Kapurthala.	..		
		6. Tata Locomotive & Engg. Co., Ltd., Bombay.	..		
		7. Mahindra and Mahindra, Ltd., Bombay.	Ligett Spring and Axle Co., U.S.A.	1960/61	
		8. Deepak Industries Ltd., Calcutta.	..	,,	
		9. Murarka Engineering Works, New Delhi.	..	,,	

1	2	3	4	5	6
		4. Ceat Tyres of India Ltd., Bombay.	Ceat Gommas, Italy		Under consideration.
52	Fan Belts	1. National Rubber Mfgrs. Ltd., Calcutta.	..	In production.	
		2. Kadar Rubber Mfg. Co. Ltd., Calcutta.	..		
		3. Travancore Rubber Works, Trivandrum.	..		
		4. Dunlop Rubber Co. of India Ltd., Calcutta.	..		
		5. Cosmas India Rubber Works Ltd., Bombay.	..		
		6. Firestone Rubber Co., Bombay.	..		
		7. Fenner, Cockill Ltd., Madurai.	..		
53	Vacuum Hoses (Brakes)	1. Nanco Rubber and Plastic Ltd., Coimbatore.	..	Do.	
		2. Indian Rubber Manufacturers Ltd., Calcutta.	..		
		3. National Rubber Mfgrs. Ltd., Calcutta.	..		
		4. Orient Rubber Industries Ltd., Bombay.	..		
54	Rubber Components	1. Nanco Rubber and Plastics Ltd., Coimbatore.	..	Do.	
		2. National Rubber Mfg. Co. Ltd., Calcutta.	..		
		3. Indian Rubber Mfg. Ltd., Calcutta.	..		
		4. Oriental Rubber Industries, Bombay.	..		

		10. Canara Workshop Ltd., Nagpur/Kalyan.	..	,,	
		11. Bharat Springs (P), Ltd., Bombay-19.	..		
		12. L. Ramabupal Reddi, Kurnool.	..		Under consideration.
48	Foundery & Castings (Ferrus).	1. Hindustan Motors, Ltd., Calcutta.		In production	
		2. Premier Automobiles, Ltd., Bombay.		..	
		3. Tata Locomotive and Engg. Co., Bombay.		..	
		4. Unicorn (P) Ltd., Madras .		..	
		5. Ashok Leyland, Ltd., Madras.		..	Under consideration.
		6. Indamer & Co., (P), Ltd., Bombay.		..	
49	Foreigns	1. Premier Automobiles. Ltd., Bombay.			
		2. Hindustan Motors, Ltd., Calcutta.			
		3. Tata Locomotive and Engg Co., Ltd., Bombay.			
		4. Indamer Co. Pte. Ltd., Bombay.			
		5. Praga Tools Corporation Ltd., Secunderabad.			
		6. Amalgamations (P), Ltd., Madras.	M/s. Ambrose Shardlow & Co. Ltd., U. K.		
50	Auto Pressings	1. Anandji Haridass & Co. (P), Ltd., Bombay.	..	1960	
51	Tyres and Tubes	1. Dunlop Rubber Co. of India, Ltd., Calcutta.	Dunlop of U. K.	In production (Only Tyres).	
		2. Firestone Tyre and Rubber Co. of India, Ltd., Bombay.	Firestone of U. K.		
		3. Dunlop Rubber Co. of India, Ltd., Ambuttur.	Dunlops of U. K.		

55	Radiator Hoses	1. Pioneer Rubber Mills Ltd., Bombay.	..	In production
		2. Korula Rubber Co. Ltd., Bombay.	..	
		3. National Rubber Mfgrs. Ltd., Calcutta.	..	
		4. Travancore Rubber Works, Trivandrum.	..	
		5. Kadar Rubber Mfg. Co. Ltd. Calcutta.	..	
		6. Cosmos India Rubber Works Ltd. Bombay.	..	
		7. Rubberex Industries Ltd., Bombay.	..	
		8. Associated Rubber Industries, Bhavnagar.	..	
		9. S. G. R. Industries, Dum Dum.	..	
56	Upholestry (Leather and Cloth).	1. Bhor Industries Ltd., Bombay—1.	..	Do.
		2. Dharam Leather Cloth Co. Ltd., Bombay.	..	
		3. Elphinstone Spinning and Weaving, Bombay.	..	
		4. National Leather Cloth Co., Bombay.	..	
		5. Leather Cloth Processers & (P) Ltd., Bombay.	..	
		6. Varma Industries (P) Ltd., Bangalore.	..	
57	Springs	Hoare Miller & Co., Calcutta	..	
58	Cushions	Hoare Miller & Co., Calcutta	..	Do.
		Dunlops Co. Ltd., Calcutta	Dunlops of U. K.	
		Usha Automobile and Engg. Co. Ltd., Calcutta.	..	

1	2	3	4	5	6
58	Brake Fluid	1. S.V.O.C. Calcutta/Bombay	S.V.O.C., U.S.A.	In production.	
		2. Bhavnagar Oil and Chemical Industries, Bhavnagar.	..		
		3. Waxpol Industries Ltd., Calcutta.	..		
		4. Indian Process and Chemical Factory, Bangalore.	..		
		5. Automobile Products of India, Ltd., Bhandup, Bombay.	Lockhead U. K.		
		6. Addison Paints & Chemicals, Ltd., Sembiam, Madras.			
59	Nitro Cellulose Lacquers	1. Alkali & Chemical Corpn. of India Ltd., Calcutta.	Subsidiary of I.C.I.	Do.	
		2. Addison Paints & Chemicals Ltd., Madras.	..		
		3. Shalimar Colour and Paint Works, Calcutta.	Prichen Jhonsons of U. K.		
		4. Empire Chemical Co., Calcutta.	..		
		5. Jenson Nicholson, Ltd., Calcutta.	Jhenson Nicholson of U.K.		
		6. Asia Chemical Co., New Delhi.	..		
		7. Excell Chemical Industries, Bangalore.	..		
60	Glass (Laminated)	1. Hindustan Safety Glass Co. Ltd., Calcutta.	..	Do.	
61	Hardware (Bolts, Nuts, etc.).	1. National Iron and Steel Co Ltd., Calcutta.	..	Do.	
		2. Shri Krishna Private Ltd., Calcutta.	..		
62		3. G. K. W. Ltd., Calcutta	..		

		4. Shantram & Sons, Ludhiana 5. Macoglad Co. Ltd., Bombay	.. ..	
63	Bus and Lorry Bodies	1. Jayanand Khira, Bombay 2. Ruby Industries, Bombay 3. Hyderabad Alwyn Metal Works Ltd., Hyderabad. 4. Simson & Co. Ltd., Madras 5. T. V. S. & Sons (P) Ltd., Madurai. 6. Airflow Transport (India) Pte. Ltd., Bangalore.	.. ..	Prior to 19
		7. New India Motors (Regd)., New Delhi.	.	1957
		8. Universal Motors, Bombay	.	1960
		9. India Body Builders, Dadar, Bombay.	.	In production.
		10. Tata Locomotive and Engg. Co. Ltd., Bombay.	..	1960
64	Coil Springs	1. M/s. M. G. Brothers, Battery-2 (Mysore State).	M/s. Stumpp & Schule, Benren, W. Germany.	Scheme under consideration.
65	Miscellaneous ancillaries like Oilfiller caps, Shifter lever reverse, Dynamo Fan Assembly, Matings, Body panel harnes.	1. Auto Pins (I) Regd., Kashmere Gate, Delhi.	..	1953
		2. Anandji Haridas & Co. Pte. Ltd., Bombay.	..	1960
		3. Orient General Industries Ltd., Calcutta.	Joseph Lucas of U. K.	Scheme under consideration.
		4. Metal Box Co of India, Ltd., Calcutta.	..	In production.
66	Starter Motors	1. Best & Co. Private Ltd., Madras.	Simms Motors Unit's U.K.	1960
		2. Orient General Industries Ltd., Calcutta.	Joseph Lucas Ltd., U. K.	1960

APPENDIX IV

(*a*) Foreign Exchange per vehicle for the production programme envisaged in April-Sept. 1959 :

Sl. No.	Vehicle	Foreign exchange per imported pack	Total allocation of foreign exchange
		Rs.	Rs.
1	Car Fiat 1100	3,317·70	84·0 lakhs
2	Car Hindustan Ambassador	2,492·00	120·0 ,,
3	Car Standard Pennant	4,110·30	63·0 ,,
4	Truck Dodge 1 ton	5,615·00	
5	Truck Dodge 3 ton (Diesel)	2,698·00	250·38 ,,
6	Truck Dodge 3 ton (Petrol)	1,718·00	
7	Truck Bedford (Diesel)	6,820·00	200·00 ,,
8	Truck Bedford (Petrol)	8,102·00	
9	Truck Leyland Comet	14,329·00	176·00 ,,
10	Truck Leyland Titan/Tiger	36,692·00	
11	Truck Tata Mercedes Benz	6,717·70	325·00 ,,
12	Jeep C. J-3B	2,827·66	
13	Jeep Utility Van	3,652·50	159·00 ,,
14	Jeep Truck	6,436·36	
15	Diesel Engine		113·76 ,, Rs. 1,491·64
	(*b*) Foreign exchange given to automobile ancillary industries to balance the same production programme (April- Sept. 1959).		80·00 lakhs
	(*c*) Foreign exchange given to automobile manufacturers for bringing in spares for the maintenance and servicing of their vehicles		100·00 ,,
	(*d*) Value of import licences issued by C.C.I. & E. for spare parts imports through the trade		350·00 ,,
	(*e*) Value of foreign exchange given to State Transport undertakings for the maintenance of their fleet.		50·00 ,,
	(*f*) Value of foreign exchange given to provide fleet-owners for the maintenance of their vehicles		
	TOTAL		2,071·64 lakhs

APPENDIX V

List of proposals for the manufacture of small cars with inadequate details

1. Proposal of M/s. Puri Industries, Yamuna Nagar, Punjab, for the manufacture of a low priced car.
2. Proposal of M/s. International Industries & Trading Corpn., Calcutta, for the manufacture of King Midget car of U.S.A. origin.
3. Proposal of Dr. Dewan Singh, New Delhi, for the manufacture of a car modelled on the basis of Uni-Car of U.K. origin.
4. Proposal of M/s. Premnath Motors Private Ltd., New Delhi, for the manufacture of B.M.W. 600 car and 'India 600' car. The particulars of the scheme relating to 'India 600' have been indicated in Appendix VI.
5. Proposal of M/s. Marshall Sons & Co. (India) Ltd., New Delhi, for the manufacture of 'Frisky' car of U.K. origin.
6. Proposal of Shri K. C. Lahiree, Bombay, for the manufacture of a small car.
7. Proposal of M/s. Ford Motor Co. of Canada, for the manufacture of their car.
8. Proposal of M/s. Citroen, Paris, for the manufacture of Citroen 2 CV car.
9. Proposal of M/s. Hindustan Motors Ltd., Calcutta, for the manufacture of 'Isetta'.
10. Proposal of Shri M. A. Chidambaram, for the manufacture of 'Datsun' car.
11. Proposal of M/s. Mohanwi Corporation, Private Ltd., Delhi, for the manufacture of 'Skoda' car of Czechoslovakian origin.

NOTE.—Proposal Nos. 10 and 11 were withdrawn subsequently.

363 C&A.G.—12

APPENDIX VI

BRIEF RESUME OF THE PROPOSALS FOR THE MANUFACTURE OF SMALL CARS FALLING UNDER THE CATEGORY OF MINIATURE CARS EXCLUSIVE OF THOSE INCLUDED IN APPENDIX V.

1. *Scheme of M/s. Associated Corporation of Industries (India) Private Ltd., Bombay.*

(*a*) Name of the Applicant	M/s. Associated Corporation of Industries (India) Private Ltd., Bombay.
(*b*) Foreign collaboration, if any	M/s. Hans Glas Isaria, Dingolfing, Germany
(*c*) Particulars of the car	Goggomobile.
(*d*) Price range envisaged	Rs. 5,500/- Rs. 6,500/- Retail.
(*e*) Volume of production	10,000 *Nos.* per annum.
(*f*) Manufacturing programme :	Not indicated.
(*g*) Total investment envisaged	Do.
(*h*) Extent of foreign capital participation	Do.

2. *Scheme of M/s. Engg. Projects Private Ltd., Calcutta.*

(*a*) Name of the applicant	M/s. Janajan Ltd., Calcutta.
(*b*) Foreign collaboration, if any	Collaboration with a British firm proposed. Name not indicated.
(*c*) Particulars of the car	'Uni Car'.
(*d*) Price range envisaged	Rs. 4,750/- Retail.
(*e*) Volume of production	3000 Nos. per annum.
(*f*) Manufacturing programme	80/90% in four years. (Details of components to be produced in each year have not been indicated).
(*g*) Total investment envisaged	Rs. 50 lakhs (Issued capital) (Rs. 1·5 lakhs for imported plant & machinery)
(*h*) Extent of foreign capital participation	Nil.

3. *Scheme of M/s. Sen & Pandit Private Ltd., Calcutta*

(*a*) Name of the applicant	M/s. Sen & Pandit Private Ltd., Calcutta.
(*b*) Foreign collaboration, if any	N. S. U., West Germany.
(*c*) Particulars of the car	N. S. U. Prinz II.
(*d*) Price range envisaged	Rs. 7,000/- (Retail).
(*e*) Volume of production	10,000 Nos. per annum ultimate.
(*f*) Manufacturing programme	70% in five years.
(*g*) Total investment envisaged	Not indicated (initial) (Rs. 2·25 crores for imported plant & machinery).
(*h*) Extent of foreign capital participation	Not available.

4. *Scheme of Shri Murarji J. Vaidya, Bombay*

(*a*) Name of the applicant	Shri Murarji J. Vaidya, Bombay.
(*b*) Foreign collaboration, if any	M/s. York Noble Industries Ltd., U. K.
(*c*) Particulars of the car.	'NOBLE 200'.
(*d*) Price range envisaged	Rs. 3,900/- Ex-factory.
(*e*) Volume of production	Not indicated.
(*f*) Manufacturing programme	Do.

(*g*) Total investment envisaged . .	Rs. 13,33,000/- (initial) (Rs. 6·6 lakhs for imported plant & equipment).
(*h*) Extent of foreign capital participation .	Nil.

5. *Scheme of Shri Noshirwan Godrej, Indore City*

(*a*) Name of the applicant . . .	Shri Noshirwan Godrej, Indore City.
(*b*) Foreign collaboration, if any . .	M/s. Sharpe Commercials Ltd., Lancashire (U. K.).
(*c*) Particulars of the car . . .	'Bond Mini car'.
(*d*) Price range envisaged : . . .	Rs. 5,500/- to Rs. 6,000/- retail.
(*e*) Volume of the production . . .	Not indicated.
(*f*) Manufacturing programme . .	60-70% in three years (Details not available).
(*g*) Total investment envisaged . .	Not available (Rs. 4 lakhs for imported plant & machinery).
(*h*) Extent of foreign capital participation.	Not available.

6. *Scheme of M/s. Bajaj Tempo Private Ltd., Bombay*

(*a*) Name of the applicant . . .	M/s. Bajaj Tempo Private Ltd., Bombay.
(*b*) Foreign collaboration, if any . .	M/s. Vidal & Sohn Tempo-Werk, G.M.B.H. Hamburg.
(*c*) Particulars of the car . . .	Tempo Mini-Car.
(*d*) Price range envisaged . . .	Between Rs. 4,950/- & Rs. 5,220/- (Net dealer). Between Rs. 5400/- & Rs. 5700/- (Retail).
(*e*) Volume of production . . .	9000 Nos. per annum.
(*f*) Manufacturing programme . .	75 to 85% within less than 2 years. (Details of components to be produced in each phase not available).
(*g*) Total investment envisaged . .	Not available. (Rs. 72 lakhs for imported plant & machinery).
(*h*) Extent of foreign capital participation.	Not available.

7. *Scheme of M/s. United Provinces Commercial Corporation Pvt. Ltd.*

(*a*) Name of the applicant . . .	M/s. Bayerische Motor En. Werke. West Germany.
(*b*) Foreign collaboration, if any . .	B. M. W. of West Germany.
(*c*) Particulars of the car . . .	B. M. W. 600 (Later B. M. W. 700).
(*d*) Price range envisaged . . .	Rs. 6,000/- (Retail).
(*e*) Volume of production . . .	20,000 Nos. per annum in two shifts.
(*f*) Manufacturing programme . .	88-59% in 3 years & months (Details of components to be developed in each stage not indicated).
(*g*) Total investment envisaged . .	Not available (Rs. 6·84 lakhs for imported plant & machinery)
(*h*) Extent of foreign capital participation .	Not available

8. *Scheme of M/s. Premnath Motors Private Ltd., New Delhi.*

(*a*) Name of the applicant. . . .	Premnath Motors Private Ltd., New Delhi.
(*b*) Particulars and brief specification of the car.	"Indo 600". (The features of "India 600" will be : Engine & Chassis—BMW 600 C.C. Body———4 Seater Designed. by an Italian. Lamp Assy————CARELLO—makes. Electrical equipment.—TECHNOEXPORT makes).

Specification :

Engine : 2 cylinder Aircooled (Rear engine) (OHV).

B. H. P. : 23·0/4500 rpm.

Displacement : 582 C.C.

G. V. Weight :.....

Ground clearance :.....

Fuel Consumption : 47 mpg.

Wheel base : 67"

(*c*) Price range envisaged . . . Between Rs. 5,400/- & Rs. 6,650/-

(*d*) Volume of production . . . About 8000 *Nos.* per annum.

(*e*) Manufacturing programme . .

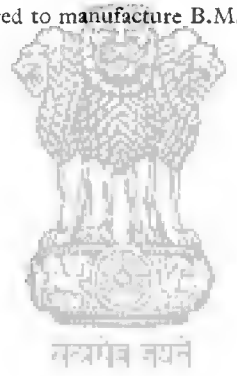
Phase	*Period*	*Percentage*
I	1 year	60%
II	1 year	80%
III	1 year	90%

(Details of components to be manufactured in each phase have not been indicated.)

(*f*) Total investment envisaged . . Rs. 2 crores (Authorised capital) (Rs. 80 lakhs for imported plant & machinery.)

(*g*) Extent of foreign capital participation . Not indicated.

N. B. :—The party earlier desired to manufacture B.M.W. 600 car.



(*f*) Manufacturing programm :

Phase	*Period*	*Percentage*	*Items to be manufactured*
I	18 months	50%	Bought out parts, Front axle parts, components of Body.
II	6 months	63·11%	Balance of body components, Gear box without taper roller bearings.
III	6 months	77·80%	Transmission and rear axle without U joint.
IV	15 months	92·40%	Engine without clutch and accessories.

(*g*) Total investment envisaged : . . Rs. 4/5 crores (Rs. 2·50 crores for imported plant & machinery).

(*h*) Extent of foreign capital participation . The foreign collaborator have agreed to invest about Rs. 1·3 crores.

4. *Scheme of M/s. Premier Automobiles Ltd., Bombay*

(*a*) Name of the applicant . . . M/s. Premier Automobiles Ltd., Bombay.

(*b*) Foreign collaboration, if any . . M/s. Fiat of Italy.

(*c*) Particulars of the car . . . Fiat "600".

(*d*) Price range envisaged . . . Net dealer Rs. 6,569/-
Retail Rs. 7,226/-

(*e*) Volume of production . . . 10,000 *Nos.* per annum ultimate.

(*f*) Manufacturing programme

Phase	*Period*	*Percentage*	*Item to be manufactured*
I	18 months	20/25%	Not available.
II	18 months	50%	Do.
III	24 months	75%	Do.

(*g*) Total investment envisaged . . Not indicated (Rs. 5·50 crores for imported plant & machinery).

(*h*) Extent of foreign capital participation. Nil

5. *Scheme of M/s. Tata Locomotive & Engg. Co. Ltd., Bombay*

(*a*) Name of the applicant . . . M/s. Tata Locomotive & Engg. Co. Ltd., Bombay.

(*b*) Foreign collaboration, if any . . M/s. Diamler-Benz A. G./Auto Union G.m b.H., West Germany.

(*c*) Particulars of the car . . . D. K. W.

(*d*) Price range envisaged . . . Net dealer . . Rs. 6,950/-
Retail . . . Rs. 7,350/-

(*e*) Volume of production . . . 12,000 Nos. per annum.

(*f*) Manufacturing programme

Stage	*Period*	*Percentage*	*Items to be manufactured*
I	1 year	60%	Engine, gear box, front axle, rear axle, frame, brake system, pedals & controls, torsion bars, exhaust system; small parts, upholstry & trim, assembly & painting.
II	1 year	70%	Steering mechanism, radiator, press parts, shock absorbers, wheels, norm parts.
III	1 year	85%	Complete body press parts, norm & miscellaneous parts.

(*g*) Total investment envisaged . . Rs. 13·98 crores.
(Rs. 5·50 crores for imported plant and machinery)

(*h*) Extent of foreign capital participation Nil

APPENDIX VII

BRIEF RESUME OF THE PROPOSALS FOR THE MANUFACTURE OF SMALL CARS EXCLUSIVE OF THOSE IN APPENDICES V & VI

1. *Scheme of M/s. Hindustan Aircraft Ltd., Bangalore*

(*a*) Name of the applicant	M/s. Hindustan Aircraft Pvt. Ltd., Bangalore.
(*b*) Foreign collaboration, if any	Nil.
(*c*) Particulars of the car.	Low Cost utility car.
(*d*) Price range envisaged	Rs. 5,000/- Retail.
(*e*) Volume of production	6,000 *Nos.* per annum ultimate.
(*f*) Manufacturing programme	Not available.
(*g*) Total investment envisaged	Not available (Rs. 60 lakhs for imported plant & machinery).
(*h*) Extent of foreign capital participation	Does not arise.

2. *Scheme of M/s. Hindustan Motors Ltd., Calcutta*

(*a*) Name of the applicant	M/s. Hindustan Motors Ltd., Calcutta.	
(*b*) Foreign collaboration, if any	Morris Motors Ltd., U. K.	
(*c*) Particulars of the car	(*i*) Baby Hindustan. (*ii*) New Morris Minor.	
	Baby Hindustan	New Morris Minor
(*d*) Price range envisaged	Net dealer Rs. 6,800/- Retail ..	Rs. 6,350/- Rs. 6,850/-
(*e*) Volume of production	Not indicated.	
(*f*) Manufacturing programme	In 2 to 2½ years the indigenous content is expected to reach the present level of Hindustan Ambassador. Details of components to be produced in each phase have not been indicated. In Hindustan Ambassador parts of body penal and other parts are still to be developed.	
(*g*) Total investment envisaged	Not indicated. (*i*) For Baby Hindustan additional imported plant and machinery—Rs. 150 lakhs. (*ii*) For New Morris Minor additional imported plant and mechinery—Rs. 2 crores. (*iii*) For modernisation and balancing of the existing plant—Rs. 1·5 crores.	
(*h*) Extent of foreign capital participation.	Not indicated.	

3. *Scheme of M/s. Mahindra & Mahindra Ltd., Bombay*

(*a*) Name of the applicant	M/s. Mahindra & Mahindra Ltd., Bombay.
(*b*) Foreign collaboration, if any	M/s. Regie Nationalcdes Usines Renault France.
(*c*) Particulars of the Car	Renault "Dauphinoise".
(*d*) Price range envisaged	Rs. 5,210/- Ex-Works Cost without profit.
(*e*) Volume of production	10,000 *Nos*: per annum.

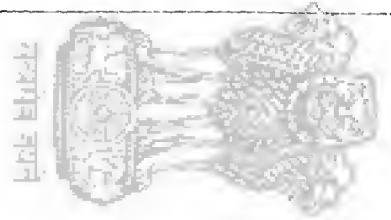
APPENDIX VIII

SPECIFICATION, CHARACTERISTICS AND BRIEF RESUME OF MANUFACTURING PROGRAMMES (WHERE APPLICABLE) OF MOTOR CARS WHICH WERE CONSIDERED BY THE AD HOC COMMITTEE FOR SUITABILITY OF MANUFACTURE IN INDIA

Sl. No.	Name of the Applicant	(a) M/s. U.P. C.C., Lucknow (b) M/s. Prem Nath Motors Private Ltd., New Delhi	Shri Murarji J. Vaidya, Bombay	Shri Noshirwan Godrej, Indore City	M/s., Tata Locomotive & Engg. Co. Ltd., Bombay-6	M/s. Premier Automobiles Ltd., Bombay-7	M/s. Mahindra & Mahindra Ltd., Bombay-8	M/s. Hindustan Motors Ltd., Calcutta.	
1	2	3	4	5	6	7	8	9	
2.	Name of the car	B.M.W. 600	NOBLE 200	BOND MINI CAR	D. K.W.	FIAT 600	RENAULT DAUPHINE	A.D.O. 15 (NEW MORRIS MINOR)	BABY HINDUSTAN
3.	Country of origin	Germany	U. K.	U. K.	Germany	Italy	France	U. K.	U. K.
4	Estimated Price in India—Retail	(a) Rs. 6,000 aprox. (b) Rs. 4,500/5,500	Rs. 3,900 (Ex-Factory)	5,500/6,000	Rs. 6,700 (NDP) Rs. 7,350 (Retail)	Rs. 6,569 (NDP) Rs. 7,226 (Retail)	Rs. 5,210 (Ex-works cost)	Rs. 6,350 (NDP) Rs. 6,850 (Retail)	Rs. 6,800 (NDP)
5.	Volume of production per annum.	(a) Rs. 10,000 Nos. (Ultimate) 8000	. . .	2000 initial	120,000 Nos.	10,000 Nos.	10,000 Nos.		
6.	Indigenous content to be achieved.	(a) Rs. 88·59% in 3rd stage (b) . .	. . .	60-70% by 3rd year.	85% by 3rd year.	75% by 5th year.	92 % by 3rd year & 9 months.	In 2 to 2½ years the indigenous content is expected to reach the present leavel of Hindustan Ambassador.	
7.	Investment envisaged on Plant & Equipment.	(a) Rs. 6·84 lakhs (b) Rs. 1·42 crores.	Rs. 6·67 lakhs	Rs. 4 lakhs	Rs. 5·50 crores	Rs. 5·50 crores	Rs. 2·50 crores	Rs. 2 crores	Rs. 60 lakhs.

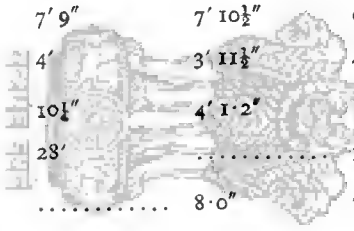
1	2	3	4	5	6	7	8	9
8. Number of Seats	4	2 Adults 2 Children	4	4	4	4	4	
9. Engine position	Rear	..	..	Front	Rear	Front	Front	Front
10. Engine (Air cooled/Water-cooled).	Aircooled	Aircooled	..	Watercooled	Watercooled	Watercooled	..	Watercooled
11. Peak D. H. P. .	19·5	10·2	..	37·4	22	26	36	37
12. Number of cylinders.	2	1	1	3	4	4	4	4
13. C. C. . .	935	200	250	741	633	845	850	948
14. Fuel consumption (Miles per Gallon).	47/61	80/90	75 at 55 M.P.H.	37/42	..	33·4	58 at 40 M. P. H.	54 at 40 M. P. H.
15. Drive position	Rear	Rear	..	Front	Rear	Rear	Front	Rear
16. Type of suspension.	Independent all round	..	..	Independent all round	Independent all round	Independent all round	Independent all round	Independent Semi-elliptic Rear
17. Overall Length	9′ 6″	10′ 7″	11′	12′ 11½″	10′ 7⅛″	12′ 3″	10″ ½″	12′ 4″
18. Overall Width .	4′ 7″	4′ 7″	5′	5′ 2½″	4′ 6″	..	4′ 7″	5′ 1″
19. Overall Height	4′ 6″	4′ 3″	4′ 6″	4′ 7″	4′ 6¼″	4′ 11″	4′ 3-3/8″	5′
20. Overall Weight	1135 lbs.	672 lbs.	..	1485 lbs.	1232 lbs.	2556 lbs.	..	1708 lbs.

	WBase							
		6′ 9″	..	7′ 1½″	6′ 6¼″	7′ 8½″	6′ 8″	7′ 2″
22. Front Track .	4′	..	..	3′ 10½″	3′ 9″	3′ 9½″	4′ ¼″	4′ 2-3/3″
23. Rear Track .	3′ 9·7″	..	..	3′ 11¼″	3′ 8½″	..	3′ 10¼″	4′ 2″
24. Turning Circle	26′ 2½″	..	.	36′	26′ 3″	..	36′-2″	34′ 6″
25. Ground Clearance	..	9″	7″	..	6½″	..	6-3/8″	6½″
26. Tyre Size .	5·20×10	4·40×8	..	5·20×12	5·20×12	4·75×16	5·20×10	5·60×14



Sl. No.	Name of the applicant	M/s. Associated Corpn. of Industries (I) Pvt. Ltd., Bombay	M/s Bajaj, Tempo Pvt. Ltd., Bombay	M/s. Mohanwi Corpn. Pvt. Ltd., Delhi	(*a*) M/s Janajan Ltd., Calcutta (*b*) Dr. Diwan Singh, N. Delhi	M/s. International Industries & Trading Corpn., Calcutta	M/s. Sen & Pandit Pvt. Ltd., Calcutta	M/s. Hindustan Air-Craft Ltd., Bangalore
1.								
2.	Name of the Car. . . .	GOGGOMOBILE	TEMPO MINI CAR	SKODA OCTAVIA	UNI CAR	KING MIDGET	NSU PRINZ II	
3.	Country of origin . . .	Germany	Germany	Czechoslovakia	U. K.	U. S. A.	Germany	India
4.	Estimated price in India-Retail.	Rs. 5,500/6500	Rs. 5,400/5,700	Rs. 5,000/7,000	(a) Rs. 4,750 (b) Rs. 5,500	Rs. 2,000	Rs. 7,000	Rs. 5,000
5.	Volume of production per Annum.	10,000 *Nos.*	9,000 *Nos.*	10,000 *Nos.*	(a) 3,000 (b)	5,000 *Nos.*	10,000 *Nos.*	6,000 *Nos.*
6.	Indigenous content to be achieved	.....	75-85% within two years.	100% within two years.	(a) 80-90% by 4th year (b)	.....	70% by the 5th year	.....
7.	Investment envisaged on Plant & Equipment.	.....	Rs. 72 lakhs	.....	(a) Rs. 1·5 lakhs (b) Rs. 26·67 lakhs.	.....	Rs. 2·25 crores	Rs. 2·20 crores
8	Number of Seats . . .	4	4	4/5	2 Adults 2 Children	3	4	5
9.	Engine position . . .	Rear	Rear	Front	Rear	Rear	Rear	Front
10.	Engine (Air-cooled/Water-cooled)	Air cooled	Water cooled	Water cooled	Air cooled	Air cooled	Air cooled	Air cooled
11.	Peak B.H.P. . . .	20	16	45	18	9·25	24	20
12.	Number of Cylinders . .	2	2	4	2	1	2	2
13.	C. C.	392	395	1089	328	377	583	730

14. Fuel Consumption. (Miles per Gallon)	67	54	35 at 45 M. P. H.	75	S. V.	60 H. V.	50 at 40 M. P. H.
15. Drive Position . . .	Rear	Rear	.....	Rear	Rear	Rear	Front
16. Type of Suspension . .	Independent all round	Independent all round	.....	Independent all round	Independent all round	Independent all round	Independent all round
17. Overall Length . . .	9′ 6¼″	10′ 9″	13′ 4″	9′ 8″	9′ 9″	10′ 3·8″	12′ 6″
18. Overall Width . . .	4′ 2½″	4′ 10¼″	5′ 3″	4′ 10″	4′ 4″	4′ 7·9″	5′
19. Overall Height . . .	4′ 3½″	4′ 4¼″	4′ 8·3″	4′ 4″	4′ 3″	4′ 6″	4′ 10″
20. Overall Weight . . .	915 lbs.	990 lbs.	1962 lbs.	700 lbs.	690 lbs.	1113 lbs.	1000 lbs.
21. Wheel Base	5′ 10¼″	7′ 9″	7′ 10½″	6′	6′ 4½″	6′ 6¾″	7′ 9″
22. Front Track . . .	3′ 6¾″	4′	3′ 11½″	4′	.....	3′ 11¼″	.....
23. Rear Track	Do.	10¼″	4′ 1·2″	3′	.....	.....	.....
24. Turning Circle . . .	24′ 6″	28′	.....	39′	27′	28′ 2½″	.....
25. Ground Clearance . . .	7¾″	.....	8·0″	7½″	.....	.....	9′ 5″
26. Tyre Size	4·80×10	4·00×12	.....	.....	.....	4·40×12	520×14



NOTE:— 1. M/s. Marshall & Sons Private Ltd., envisaged interest in the manufacture of risky car after the Committee had finalised their sittings.

2. Shri M. A. Chidambaram submitted a proposal for Datsun car, but withdrew later.

3. Shri K. C. Lahiri envisaged interest in the manufacture of a small car, but no detailed specification was given.

4. Ford Motor Co. of Canada showed interest in the manufacture of their cars.

5. Citren Paris also showed interest for the manufacture of 2 CV Cars.

6. M/s. Premnath Motors Private Ltd., who subsequently submitted another scheme for manufacture of India 660 (*See* Appendix VI)

APPENDIX IX

SHOW ROOM PRICES OF CARS

Sl. No.	Name of the car	Source	Destination	Mode of Transport	Nett Dealer price	List price	Central Sales Tax	State Sales Tax	Toll Tax	Transit Insurance	Tempy. Regn.	Freight including Loading and unloading or Driver's and Fuel charges	Misc. charges	Price of the car at the Showroom
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
					Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1.	Hindustan Ambassador.	Calcutta		Rail	10,559	11,612	106·09	1004·72	..	125·00		701·00	122·00	13670·81
	Standard Ten	Madras	Hyderabad	Road .	8,621	9,480	86·21	742·00	..	..	10	145·00	..	10463·21
	Fiat 1100 .	Bombay		Rail .	8,621	9,480	86·21	742·00	..	40·06	..	396·00	..	10744·27
	Fiat 1100 .	Bombay		Road	8,937	9,828	89·00	763·00	8·00	21·00	4	229·00	..	10942·00
2.	Hindustan Ambassador.	Calcutta		Road .	10,559	11,612	106·09	852·82	..	104·37	5	295·12	165·00	13140·40
	Standard Ten	Madras	Nagpur	Rail	8,621	9,480	86 21	711·30	..	40·06	..	511·00	..	10828·57
	Fiat 1100 .	Bombay		Road .	8,937	9,828	..	725·00	327·00	70·00	4	132·00	..	11086·00
				Rail .	8,937	9,828	..	745·00	300·00	90·00	..	419·00	..	11382·00

3. Hindustan Ambassador	Calcutta	Lucknow	Road	10,559	11,612	106·09	749·15	43·00	40·75	5	271·25	134·00	13060·99
Standard Ten	Madras		Rail	8,621	9,480	87·07	731·64	..	40·06	..	872·00	..	11210·77
Fiat 1100	Bombay		Road	8,937	9,828	89·00	725·00	27·00	46·00	4	357·00	..	11076·00
4. Hindustan Ambassador.	Calcutta	Delhi	Road	10,559	11,612	106·09	757·69	..	61·00	5	289·00	146·00	12976·78
Standard Ten	Madras		Rail	8,621	9,480	86·21	657·83	..	40·06	..	919·00	..	11183·10
Fiat 1100	Bombay		Road	8,937	9,828	89·00	719·00	39·00	49·00	4	210·00	50·00	10988·00
			Rail	8,937	9,828	89·00	747·00	39·00	38·00	..	683·00	..	11424·00
5. Hindustan Ambassador	Calcutta	Calcutta	..	10,559	11,612	..	580·60	..	..	..	..	80·00	12272·60
Standard Ten	Madras		Rail	8,621	9,480	86·21	512·15	..	40·06	..	721·00	..	10839·42
Fiat 1100	Bombay		Rail	8,937	9,828	89·00	540·00	..	98·00	..	785·00	..	11340·00
6. Hindustan Ambassador	Calcutta	Madras	Rail	10,559	11,612	106·09	877·03	..	90·00	..	721·00	136·00	13542·12
Standard Ten	Madras		..	8,621	9,480	..	..	..	605·00	..	..	..	10085·44
Fiat 1100	Bombay		Road	8,937	9,828	89·00	718·00	7	50·00	4	275·00	..	10971·00
			Rail	8,937	9,828	89·00	737·00	..	40·00	..	575·00	..	11269·00
7. Hindustan Ambassador	Calcutta	Bombay	Rail	10,559	11,612	106·09	1264·00	..	66·00	..	818·00	106·00	13972·09
Standard Ten	Madras		Rail	8,621	9,480	86·21	1022·70	..	40·06	..	577·00	..	11205·97
			Road	8,621	9,480	86·21	1022·70	..	..	5	210·00	..	10803·91
Fiat 1100	Bombay		..	8,937	9,828	626·00 (special)	314·00	..	..	..	..	25·00	10793·00

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
					Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
8.	Hindustan Ambassador	Calcutta	Amritsar	Road .	10,559	11,612	106·09	858·97	40	97·75	5	360·00	166·00	13245·00
	Standard Ten	Madras		..	8,621	..	..	..	..	..	..	..	..	..
	Fiat 1100 .	Bombay		Road .	8,937	9,828	89·00	722·00	27	65·00	4	260·00	44·00	11039·00
9.	Hindustan Ambassador	Calcutta	Trivandrum	Rail	10,559	11,612	106·09	887·00	..	94·00	..	851·65	136·50	13687·24
	Standard Ten	Madras		Road	8,621	9,480	86·21	689·08	..	..	2	104·00	..	10361·29
	Fiat 1100 .	Bombay		Road	8,937	9,828	89·00	732·00	7	65·00	4	469·00	..	11194·00
				Rail	8,937	9,828	89·00	754·00	..	135·00	..	869·00	..	11685·00
10.	Hindustan Ambassador.	Calcutta	Shillong	Steamer	10,559	11,612	106·09	858·76	..	110·00	..	440·00	116·00	13242·65
	Standard Ten	Madras		Rail	8,621	9,480	86·21	763·49	..	40·06	..	1127·07	..	11496·83
	Fiat 1100 .	Bombay		Rail	8,937	9,828	89·00	801·00	..	165·00	..	1365·00	..	12248·00
11.	Hindustan Ambassador.	Calcutta	Srinagar	Road	10,559	11,612	106·09	373·91	77·00	113·50	5·00	500·00	82·00	12869·00
	Standard Ten	Madras		Rail	8,621	9,480	86·21	327·69	..	40·06	..	1123·00	..	11056·96
	Fiat 1100 .	Bombay		Road	8,937	9,828	89·00	316·00	40·00	74·00	4·00	444·00	45·00	10840·00
				Rail	8,937	9,828	89·00	337·00	30·00	111·00	..	1178·00	..	11573·00

N. B. (1) The net dealer and retail prices in the case of Hindustan Ambassador and Fiat 1100 are with W.S.W. Tyres.

(2) The show-room prices in the case of Hindustan Ambassador include Road Tax and Registration charges.

APPENDIX X

COMPARATIVE STATEMENT OF PROGRESS OF THE APPROVED MANUFACTURING PROGRAMMES OF VEHICLES

Component	Hindustan Ambassador				Standard Ten				Fiat 1100			
	Manufactured in 1956	Manufactured upto 1959 (cumulative)	To be developed in the factory by 1961	To be obtained indigenously as and when sources develop	Manufactured in 1956	Manufactured upto 1959 (cumulative)	To be developed in the factory by 1961	To be obtained indigenously when sources develop	Manufactured in 1956	Manufactured upto 1959 (cumulative)	To be developed in the factory by 1961	To be obtained indigenously as and when sources develop
1	2	3	4	5	6	7	8	9	10	11	12	13
1. *Rubber, Asbestos Parts, Gaskets.*												
Tyres and Tubes . . .	LP	..	..	..	LP	..	..	..	LP	..	..	..
Flaps	LP	..	..	..	LP	..	..	..	LP	..	..	..
Fanbelts, Hoses etc. . .	LP	..	..	..	LP	..	..	..	LP	..	..	..
Rubber Components Carpete, etc.	LP	..	..	..	LP	..	..	..	LP	..	..	..
Cylinder Head Gaskets . .	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
2. *Engine*												
Cylinder Block . . .	5,060	15,145	..	..	..	1,222	..	..	..	5,223	..	..
Cylinder Head . . .	4,930	15,163	..	..	..	2,354	..	..	..	4,067	..	..
Crankshaft . . .	4,895	15,147	..	..	..	1,437	..	..	..	3,284	..	..
Camshaft . . .	4,953	15,035	..	..	..	1,106	..	..	..	3,905	..	..

1	2	3	4	5	6	7	8	9	10	11	12	13
Connecting Rods . . .	19,812	61,010	..	..	..	2,950	..	..	..	14,100	..	..
Connecting Rod Bolts . .	48,000	28,042	..	..	..	..	..	Yes	..	..	..	Yes.
Fly Wheel . . .	4,331	14,648	..	..	..	2,280	..	..	..	4,370	..	..
Starter Gear Ring . . .	4,831	17,053	..	..	..	..	Yes.	..	..	..	..	Yes.
Oil Pans	4,968	15,679	..	..	..	..	Yes.	..	..	3,717	..	..
Timing Gears . . .	4,931	16,037	..	..	..	..	Yes	..	..	6,639	..	..
Tappets	38,808	1,20,944	..	..	..	81,000	..	..	..	..	..	Yes.
Valves	39,648	1,49,725	..	..	..	..	..	Yes	..	..	..	Yes.
Valve Guide . . .	40,264	1,30,100	..	..	..	15,578	..	..	..	27,910	..	..
Valve Spring . . .	39,648	1,19,304	..	..	..	..	..	Yes.	..	..	..	Yes.
Manifolds-Intake and Exhaust .	9,662	29,188	..	..	..	2,783	..	..	..	8,787	..	..
Water Pump Assy. . . .	4,838	14,594	..	..	..	2,523	..	..	..	3,226	..	..
Ventilator and Ventilator Pully .	..	..	..	Yes.	..	2,921	..	..	1,257	7,567	..	..
Fuel tank with pipe, etc. .	..	621	..	..	..	..	..	Yes	3,510	8,168	..	..
Piston	20,145	56,986	..	..	..	LP	..	..	..	..	..	Yes.
Piston Ring	20,562	63,130	..	..	..	LP	..	..	..	..	..	Yes.
Piston Pin	..	..	..	Yes	..	LP	..	..	..	..	..	Yes
Cylinder Liner . . .	..	..	..	..	..	LP	..	..	..	..	..	..
Carburettor Assy. . . .	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes.

Fuel Pump (Petrol)	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Fuel Filter	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Fuel Lines	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Air Cleaner	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Radiator Assy.	..	LP	..	..	..	LP	..	..	3,000	11,617	..	..
Exhaust Muffler and pipes, etc.	..	LP	..	..	..	LP	..	..	10,877	33,700	..	..
Crankshaft Bearing	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
3. *Power Train.*												
Clutch Housing	4,795	15,110	..	..	..	..	Yes	..	..	4,704	..	..
Pressure Plate	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Clutch Plate	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Clutch Bearing	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Clutch Lever (Pedal)	4,795	14,667	..	..	..	..	Yes	..	..	1,230	..	..
Transmission Case	4,795	14,641	..	..	..	..	Yes	..	..	4,558	..	..
Transmission Case Cover	4,795	14,637	..	..	..	..	Yes	..	..	3,664	..	..
Transmission Pinion	4,885	15,001	..	..	..	..	Yes	..	..	..	Yes	..
Secondary shaft	4,955	15,529	..	..	..	..	Yes	..	..	..	Yes	..
Gears	4,795	14,269	..	..	..	..	Yes	..	..	..	Yes	..
Synchroniser Parts	15,515	47,944	..	..	..	..	Yes	..	..	..	Yes	..
Universal Joints	10,107	23,766	..	..	..	..	..	Yes	..	4,083	..	..
Propellor Shaft Assy.	..	..	..	Yes	..	..	..	Yes	..	4,127	..	..

1	2	3	4	5	6	7	8	9	10	11	12	13
3. *Power Train*—contd.												
Spline shaft	4,921	14,845	..	..	..	..	..	Yes	..	1,213	..	..
Crown Wheel and Pinion	5,472	17,592	..	..	..	..	Yes	..	..	..	Yes	..
Shifting Shafts	..	..	Yes	..	..	..	..	Yes	..	..	Yes	..
Gear Shift Lever	..	..	Yes	..	..	..	Yes	..	..	..	Yes	..
Gear Shift Fork	..	..	Yes	..	..	..	Yes	..	..	..	Yes	..
Differential Housing	5,312	14,145	..	..	..	..	Yes	..	..	..	Yes	..
Differential Gears	10,664	30,456	..	..	..	..	Yes	..	..	..	Yes	..
Rear Axle Side Shafts	10,834	31,346	..	..	..	..	Yes	..	..	..	Yes	..
Rear Axle and Housing	5,312	15,093	..	..	..	..	Yes	..	..	..	Yes	..
4. *Chassis Frame, Suspension, Steering and Brakes.*												
Chassis Frame (Long members)	..	8,358	..	..	..	..	..	Yes	2,325	10,161	..	..
Chassis Frame (Cross members)	..	8,358	..	..	..	..	..	Yes	2,325	10,161	..	..
Frame Brackets	..	..	Yes	..	..	..	..	Yes	2,325	10,161	..	..
Wheel Hubs	..	..	..	Yes	..	..	..	Yes	..	..	Yes	..
Brake Drums	21,786	61,047	..	..	..	12,126	..	..	..	..	Yes	..
Brke Linings	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Brake Shoes and Back Plate	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Steering Gear	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes

Steering Column	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Steering Arm	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Steering Knuckle	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Disc Wheels	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
King Pin, Wheel Bolts and Nuts	2,14,975	5,96,886	..	..	..	..	..	Yes	..	..	..	Yes
Hub Caps	..	..	Yes	..	..	LP	..	..	LP	..	..	..
Suspension Leaf Spring	..	..	..	Yes	..	LP	..	..	8,256	34,289	..	..
Suspension Coil Spring	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Torsion Bars	..	..	..	Yes	..	..	..	..	..	..	..	..
Shock absorbers	..	..	..	Yes	..	LP	..	..	..	9,867	..	..
Hydraulic Brake Assembly	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Hand Brakes	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Tie Rods	..	..	Yes	..	..	..	..	Yes	..	..	..	Yes
Bumpers	..	..	Yes	..	..	..	..	Yes	..	1,655	..	..
5. *Front Axle.*												
Front Axle	10,492	29,181	..	..	..	..	..	Yes	..	..	Yes	..
Front Axle Side Shaft	10,492	29,181	..	..	..	..	..	..	..	..	..	..
6. *Electrical Equipment*												
Dynamo	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Starter Motor	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Battery	LP	..			LP	..	..	..	LP	..	..	..

1	2	3	4	5	6	7	8	9	10	11	12	13
6. Electrical Equipment—contd.												
Starter Cable	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Ignition Coil	..	.	.	Yes	..	..	..	Yes	..	..	..	Yes
Distributor	..	..	..	Ye	..	..	..	Yes	..	..	..	Yes
Volt Regulator	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Ignition Cables	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Sparking Plugs	..	LP	..	..	..	LP	..	..	LP	LP	..	..
Lamps	..	LP	..	..	..	..	..	Yes	..	..	..	Yes
Wind Wiper	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Electric Horns	..	..	..	Yes	..	LP	..	..	..	LP	..	..
Wire Harness	LP	..	..	..	..	LP	..	..	3,474	sets 8,672	..	..
Dir. Indicator	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
7. Instruments and Gauges.												
Dash Board Instruments	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
8. Body Panel and Sheet Metal Parts												
Parts, Car Body	..	4,179	..	..	..	..	..	Yes	..	.	..	Yes
Mud. Guards	..	..	Yes	..	..	..	..	Yes	..	..	..	Yes
Seat and Chushions	LP	..	..	..	LP	..	..	..	..	7,803 sets	..	..

Doors and Locks . . .	LP	..	..	..	..	..	..	Yes	..	..	..	Yes
Wind Screen . . .	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Windows	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Handles and Regulators . .	LP	..	..	..	..	..	..	Yes	LP	..	..	..
Timings, etc.	LP	..	..	..	..	LP	..	..	LP	..	..	..
9. *Tools and Accessories.*												
Tools Kits	LP	..	..	..	..	LP	..	..	LP	..	..	..

NOTE :—LP=Local purchase.

Comparative Statement of Progress of the Approved Manufacturing Programme of Vehicles

Group	Component	Tata Mercedes Benz				Dodge—Petrol				Dodge Kew Diesel			
		Manufactured in 1956	Manufactured upto 1959 *Cum.*	To be developed in the factory by 1961	To be obtained indigenously as and when sources develop	Manufactured in 1956	Manufactured upto 1959 *Cum.*	To be developed in the factory by 1961	To be obtained indigenously as and when sources develop	Manufactured in 1956	Manufactured upto 1959 *Cum.*	To be developed in the factory by 1961	To be obtained indigenously as and when sources develop
1		2	3	4	5	6	7	8	9	10	11	12	13
4. *Rubber Asbestos Parts Gaskets.*													
	(1) Tyre and Tubes	LP	..	..	..	..	LP	..	..	..	LP	..	..
	(2) Flape	LP	..	..	..	..	LP	..	..	..	LP	..	..
	(3) Fanbelts, hoses, etc.	LP	..	..	..	..	LP	..	..	..	LP	..	..
	(4) Rubber, Components, Carpet, etc.	LP	..	..	..	..	LP	..	..	..	LP	..	..
	(5) Cylinder Head and other Gaskets	..	..	..	Yes	..	..	..	Yes	..	..	..	..
Engine :—													
	(1) Cylinder Block	..	..	Yes	..	2,939	6,498	..	..	..	..	..	..
	(2) Cylinder Head	..	1,950	..	..	3,503	7,106	..	..	..	..	..	..
	(3) Crank Shaft	..	1,930	..	..	2,195	5,463	..	..	..	..	..	..

(4) Cam Shaft	1,950	..	..	3,338	4,967	..	..	..	..	..	..
(5) Connecting Rods	1,700	..	..	9,045	25,835	..	..	..	..	..	..
(6) Connecting Rod bolts	..	Yes	..	..	..	..	Yes	..	..	..	..
(7) Fly Wheel	2,056	..	..	3,483	6,842	..	..	..	..	..	..
(8) Starter Gear Ring	2,135	..	..	..	..	..	Yes	..	..	..	..
(9) Oil Pan	2,130	..	..	..	944	..	..	..	..	..	..
(10) Timing Case	..	Yes	..	2,607	9,234	..	..	..	..	..	..
(11) Tappet	..	Yes	..	..	..	..	Yes	..	..	..	..
(12) Valves	..	..	Yes	..	..	..	Yes	..	..	..	..
(13) Valve guides	..	..	Yes	6,759	19,824	..	..	..	..	..	..
(14) Valve Spring	..	..	Yes	..	..	..	Yes	..	..	..	..
(15) Manifolds-Intake and Exhaust	..	..	Yes	5,420	8,405	..	..	..	..	..	..
(16) Water Pump Assembly	..	Yes	..	1,808	5,625	..	..	..	..	..	..
(17) Ventilator and Ventilator Pully	..	Yes	..	1,813	..	..	..	..	..	..	..
(18) Fuel Tank with pipes, etc.	17,481	..	..	1,967	6,339	..	..	3,677	11,137	..	..
(19) Piston	..	..	Yes	..	..	..	Yes	..	..	..	..
(20) Piston Ring	..	..	Yes	..	..	..	Yes	..	..	..	..
(21) Piston Pin	..	..	Yes	..	..	..	Yes	..	..	..	..
(22) Cylinder Liners	..	..	Yes	..	..	..	..	..	..	..	..
(23) Tinning Gears	1,950	..	..	..	..	..	..	..	..	..	..

1	2	3	4	5	6	7	8	9	10	11	12	13
(24) Carburattor Assembly	..	..	..	..	..	..	..	Yes	..	..	..	..
(25) Fuel Pump (Petrol)	..	..	..	..	..	..	..	Yes	..	..	..	..
(26) Fuel Injection Equipment (Diesel).	..	..	..	Yes	..	..	..	..	..	..	..	..
(27) Fuel Filter	..	..	..	Yes	..	..	..	Yes	..	..	..	..
(28) Fuel Lines	..	17,330	..	..	..	..	..	Yes	..	..	..	..
(29) Air Cleaner	..	..	..	Yes	..	..	..	Yes	..	..	..	..
(30) Radiator Assembly	..	..	..	Yes	3,390	8,352	..	..	3,203	14,331	..	..
(31) Exhaust Muffler and Pipes, etc.	..	23,807	..	..	2,580	8,161	..	..	3,222	12,868	..	..
(32) Crank Shaft bearings	..	..	..	Yes	..	..	..	Yes	..	..	..	..
Power Train :—												
(1) Clutch Housing	..	..	..	Yes	1,452	2,999	..	..	..	..	..	..
(2) Pressure plate	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
(3) Clutch plate	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
(4) Clutch bearing	..	..	..	Yes	..	..	..	Yes	..	..	...	Yes
(5) Clutch lever	..	..	Yes	..	..	..	Yes	..	..	..	..	Yes
(6) Transmission Case	..	13,415	..	..	2,696	4,293	..	..	..	193	..	..
(7) Transmission Case Cover	..	13,415	..	..	2,441	5,336	..	..	..	193	..	..
(8) Transmission Piston	..	13,415	..	..	2,313	5,629	..	..	..	193	..	..

(9) Secondary Shaft	10,000	..	..	2,334	5,158	..	..	..	..	Yes	..
(10) Gears	10,000	sets	..	..	8,750	21,953	..	..	..	..	Yes	..
(11) Synchro nisei parts	10,000	,,	..	..	..	..	..	Yes	..	..	Yes	..
(12) Universal Joints	67,000	..	..	6,810	18,985	..	..	..	16,234	..	..
(13) Propeller Shaft Assembly	24,000	..	..	5,295	11,852	..	..	5,787	21,846	..	..
(14) Spline Shaft (Gear Box)	10,000	..	..	2,214	4,401	..	..	3,858	8,265	..	..
(15) Crown Wheel and Pinion	15,747	..	..	..	..	Yes	..	..	..	Yes	..
(16) Shifting Shafts	20,000	..	..	..	..	Yes	..	..	..	Yes	..
(17) Gear Shaft lever	6,917	..	..	848	2,808	..	..	..	..	Yes	..
(18) Gear Fork	10,000	..	..	647	6,547	..	..	..	..	Yes	..
(19) Differential Housing	15,000	..	..	..	..	Yes	..	..	..	Yes	..
(20) Differential Gears	16,000	..	..	..	..	Yes	..	..	..	Yes	..
(21) Rear Axle Side Shafts	32,000	..	..	..	..	Yes	..	..	..	Yes	..
(22) Rear Axle and Housing	14,855	..	..	..	..	Yes	..	..	..	..	Yes
Chassis Frame, Suspension, Steering, Brakes											
(1) Chassis frame (Long members)	13,000 sets	..	..	3,643 (parts)	6,245	..	..	304 (parts)	9,359	..	..
(2) Chassis frame (Cross members).	13,000 sets	..	..	..	..	..	..	..	..	..	..
(3) Frame Breckets	13,000 sets	..	..	..	..	Yes	..	..	37,249	..	..
(4) Wheel hubs	..	..	..	..	746	..	..	..	746	..	..

1	2	3	4	5	6	7	8	9	10	11	12	13
(5) Brake Drums . . .	..	49,000 sets	..	..	..	1,510	..	..	..	1,510	..	..
(6) Brake Lining . . .	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
(7) Brake Shoes and Back plate	..	..	Yes	..	..	..	..	Yes	..	..	..	Yes
(8) Steering Gear . . .	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
(9) Steering column . .	..	..	Yes	..	..	..	..	Yes	..	..	..	Yes
(10) Steering arms . . .	..	..	..	Yes	..	629	..	..	..	629	Yes	..
(11) Steering Knuckle . .	..	..	..	Yes	..	..	..	Yes	..	..	Yes	Yes
(12) Disc Wheels . . .	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
(13) King pin, wheel, bolts and nuts.	..	..	..	..	..	..	Yes	..	..	..	Yes	..
(14) Hub caps . . .	..	1,26,000	..	..	..	..	Yes	..	..	..	Yes	..
(15) Suspension leaf spring (front and rear).	..	91,000	..	..	17,888	34,987	..	..	..	..	Yes	..
(16) Suspension coil spring .	..	..	..	..	..	..	..	..	..	..	..	..
(17) Torsion Bars . . .	..	..	..	..	..	..	..	Yes	..	..	..	Yes
(18) Shock Absorbers . .	..	..	..	Yes	454	1,200	..	..	..	..	Yes	..
(19) Hydraulic Brake Assembly .	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
(20) Hand Brakes . . .	..	..	Yes	..	3,100	5,826	..	..	..	..	Yes	..
(21) Tie Rods	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes
Bumpers	..	17,425 sets	..	..	1,482	2,083	..	..	..	6,710	..	.

Front Axle													
(1) Front Axle	..	25,000	..	..	..	112	..	..	..	112	..	..	
(2) Front Axle Housing	..	..	..	..	..	..	..	..	..	..	..	..	
(3) Front Axle Side Shafts	..	..	..	..	..	..	..	Yes	..	..	..	Yes	
Electrical Equipments													
(1) Dynamo	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes	
(2) Starter Motors	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes	
(3) Batteries	LP	..	..	..	LP	..	..	..	LP	..	..	..	
(4) Starter Cable	LP	..	..	..	..	..	..	Yes	..	..	..	Yes	
(5) Ignition Coil	..	..	..	..	..	..	..	Yes	..	..	..	..	
(6) Distributors	..	..	..	..	..	..	..	Yes	..	..	..	..	
(7) Voltage Regulator	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes	
(8) Ignition cable	..	..	..	..	..	..	..	Yes	..	..	..	..	
(9) Sparking plugs	..	..	..	..	LP	..	..	..	..	..	..	..	
(10) Lamps	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes	
(11) Windshield Wiper	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes	
(12) Electric Horns	..	..	..	Yes	..	LP	..	..	..	LP	..	..	
(13) Wiring Harness	LP	..	..	..	..	LP	..	..	..	LP	..	..	
(14) Direction Indicators	..	..	..	..	..	..	..	Yes	..	..	..	Yes	
Instruments and Gauges													
1. Dashboard Instruments	..	..	..	Yes	..	..	..	Yes	..	..	..	Yes	

1	2	3	4	5	6	7	8	9	10	11	12	13
Body Panels and Steel Metals Parts												
(1) Passenger car bodies	..	..	..	..	..	..	..	..	..	..	..	..
(2) Bus Bodies	..	..	Yes	..	..	..	..	..	..	..	..	..
(3) Cabs	..	..	Yes	..	..	300	1,741	..	..	..	..	..
(4) Truck Bodies	..	..	Yes	..	..	..	..	..	..	..	..	..
(5) Mudguards	..	..	Yes	..	..	..	..	Yes	..	..	..	Yes
(6) Seats, Runners, etc.	LP	..	..	..	..	..	..	..	..	..	..	..
(7) Doors and Locks	..	..	Yes	..	..	..	..	..	..	..	..	..
(8) Wind Screen	..	5,500	..	..	..	..	..	Yes	..	..	..	Yes
(9) Windows	..	..	Yes	..	..	..	..	..	..	..	..	..
(10) Windows Handles and Regulators.	..	..	Yes	..	..	LP	..	..	..	LP	..	..
(11) Trimming and Upholstery materials.	LP	..	..	..	..	LP	..	..	..	LP	..	..
Tools and Accessories												
(1) Tool Kits	LP	..	..	..	..	..	..	..	..	..	..	..
(2) Starter Crank	..	..	..	..	..	..	..	..	..	..	..	..

(3) Tyre Levers . . .	LP	..	..	..	..	..	..	..	..	..	..	..	..
(4) Jacks	LP	..	..	..	..	LP	..	..	..	LP	..	..	..
(5) Tyre Inflators . . .	LP	..	..	..	..	LP	..	..	..	LP	..	..	..
(6) Lubricating Equipment .	LP	..	..	..	..	..	..	..	..	..	..	..	..
(7) Towing Cranes/Ropes and Rods.	LP	..	..	..	..	..	..	..	..	..	..	..	..

NOTE :— (*i*) LP indicates local purchase.

(*ii*) Bedford was licensed only recently

Component	Leyland Comet				Jeep			
	Manufactured in 1956	Manufactured upto 1959 Cum.	To be developed in the factory by 1961	To be obtained indigenously as and when sources develop	Manufactured in 1956	Manufactured upto 1959 Cum.	To be developed in the factory by 1961	To be obtained indigenously as and when sources develop
1	2	3	4	5	6	7	8	9
Rubber Asbestos Parts Gaskets								
(1) Tyre and Tubes	LP	..	..	..	LP	..	..	..
(2) Flaps	LP	..	..	..	LP	..	..	..
(3) Fanbelts, hoses, etc.	LP	..	..	..	LP	..	..	..
(4) Rubber Components, etc.	LP	..	..	..	LP	..	..	..
(5) Cylinder Head Gaskets	..	..	..	Yes	..	LP	..	..
Engines								
(1) Cylinder Block	..	..	Yes	..	..	*914	..	..
(2) Cylinder Head	..	500	..	..	..	*914	..	..
(3) Crank Shaft	..	..	Yes	..	..	..	..	Yes
(4) Cam Shaft	..	..	..	Yes	..	..	..	Yes
(5) Connecting Rods	..	500 sets	..	..	..	4,317	..	..

6) Connecting Rod belts	..	..	..	Yes	..	..	..	Yes
(7) Fly Wheel	..	..	Yes	..	..	3,000	..	..
(8) Starter Gear Ring	..	..	Yes	..	..	3,200	..	..
(9) Oil Pan	..	..	..	Yes	..	LP	..	..
(10) Timing case	..	..	Yes	..	..	..	Yes	..
(11) Tappers	..	..	..	Yes	..	3,700	..	..
(12) Valve	..	..	..	Yes	..	..	..	Yes
(13) Valves Guides	..	..	..	Yes	..	..	..	Yes
(14) Valves Spring	..	..	..	Yes	..	..	..	Yes
(15) Manifolds—Intake and Exhaust	..	500	..	..	..	5,315	..	..
(16) Water Pump Assembly	..	500	..	..	..	914	..	..
(17) Ventilator and Ventilator Pulley	..	..	Yes	..	..	..	..	..
(18) Fuel Tank with Pipes, etc.	..	2,500	..	..	..	LP	..	..
(19) Piston	..	..	..	Yes	..	LP	..	..
(20) Piston Ring	..	..	..	Yes	..	LP	..	..
(21) Piston Pin	..	..	..	Yes	..	LP	..	..
(22) Cylinder Liners	..	..	..	Yes	..	..	..	..
(23) Timing Gears	..	..	Yes	..	..	914	..	..
(24) Carburettor Assembly	..	..	..	..	..	..	..	Yes
(25) Fuel Pump (Petrol)	..	..	..	..	..	..	..	Yes

1	2	3	4	5	6	7	8	9
Engines—contd.								
(26) Fuel Injection Equipment (Diesel)	..	..	..	Yes	..	..	..	..
(27) Fuel Filter	..	..	..	Yes	..	..	..	Yes
(28) Fuel lines	..	2500	..	..	..	..	..	Yes
(29) Air Cleaner	..	..	..	Yes	..	LP	..	..
(30) Radiator Assembly	LP	..	..	..	..	LP	..	..
(31) Ehxaust Muffler & Pipes etc.	..	2500	..	..	..	LP	..	..
(32) Cranksaft bearings	..	..	..	Yes	..	..	..	Yes
Power Train								
1. Clutch Housing	..	..	Yes	..	..	3768	..	..
2. Pressure plate	..	1725	..	..	..	..	..	Yes
3. Clutch Plate	..	..	..	Yes	..	..	..	Yes
4. Clutch bearing	..	..	..	Yes	..	..	..	Yes
5. Clutch lever	..	..	..	..	..	14600	..	..
6. Transmission Case	..	..	Yes	..	..	1500	..	..
7. Transmission case cover	..	..	Yes	..	..	1500	..	..
8. Transmission Pinion	..	..	Yes	..	..	1500	..	..
9. Secondary shaft	..	..	Yes	..	..	1500	..	..
10. Gears	..	.	Yes	..	..	1500 set	..	..
11. Synchroniser parts	..	..	Yes	..	..	1500	..	..

12. Universal Joints	..	..	..	Yes	..	..	..	Yes
13. Propellor shaft Assembly	..	..	..	Yes	..	..	..	Yes
14. Spline shaft (Gear box)	..	..	Yes	..	..	..	Yes	..
15. Crown Wheel and Pinion	..	..	Yes	..	..	..	Yes	..
16. Shifting shaft	..	..	Yes	..	..	1500	..	..
17 Gear shaft lever	..	..	Yes	..	..	1500	..	..
18. Gear Fork	..	..	Yes	..	..	1559	..	..
19. Ditterntial Housing	..	..	Yes	..	..	..	Yes	..
20. Ditterntial Gears	..	..	Yes	..	..	..	Yes	..
21. Rear Axle side Shafts	..	..	Yes	..	..	..	Yes	..
22. Rear Axle & Housing	..	..	Yes	..	..	..	Yes	..
Chassis, Frame, Suspension, Steering Brake								
1. Chassis frame (long members)	..	1800	..	..	..	..	..	Yes
2. ,, ,, (cross members)	..	..	Yes	..	..	4100	..	..
3. Frame brackets	..	2300	..	..	..	4000	..	..
4. Wheel hubs	..	1500	..	..	..	..	Yes	..
5. Brake Drums	..	1500	..	..	..	1500	..	..
6. Brake Lining	..	..	..	Yes	..	..	..	Yes
7. Brake shoes & back plate	..	..	..	Yes	..	..	..	Yes
8. Steering Gear	..	..	Yes	..	..	..	..	Yes
9. Steering column	..	..	Yes	..	..	LP	..	..
0. Steering arm	..	..	Yes	..	..	..	Yes	..

1	2	3	4	5	6	7	8	9
11. Steering Knuckle	..	..	..	Yes	..	..	Yes	..
12. Disc. Wheels	..	..	..	Yes	..	..	..	Yes
13. King pin, wheel, bolts & nuts	..	1750	..	..	..	LP	..	..
14. Hub caps	..	1750	..	..	..	LP	..	..
15. Suspension Leaf spring (front & rear)	LP	..	..	..	..	LP	..	..
16. Suspension coil spring	..	..	..	..	..	..	..	..
17. Tursion Bars	..	..	..	..	..	..	..	..
18. Shock Absorbers	..	..	..	Yes	..	LP	..	..
19. Hydraulic Brake Assembly	..	..	..	Yes	..	..	..	Yes
20. Hand Brakes	..	2100	..	..	..	3200	..	..
21. Tie Rods	..	1750	..	..	..	..	Yes	..
22. Bumpers	..	2700	..	..	..	4100	..	..
Front Axle								
1. Front Axle	..	1750	..	..	..	..	Yes]	..
2. Front Axle Housing	..	1750	..	..	..	..	Yes	..
3. Front Axle Side shafts	..	1750	..	..	..	..	Yes	..
Electrical Equipment								
1. Dynamo	..	..	..	Yes	..	..	..	Yes
2. Starter Motors	..	..	..	Yes	..	..	..	Yes

3. Batteries	LP	..	..	..	LP	..	..	..
4. Starter cable	..	..	..	Yes	..	..	..	Yes
5. Ignition coil	..	..	..	..	..	..	..	Yes
6. Distributor	..	..	..	..	..	..	..	Yes
7. Voltage Regulator	..	..	..	Yes	..	..	..	Yes
8. Ignition cables	..	..	..	..	..	LP	..	..
9. Sparking plugs	..	..	..	..	LP	..	..	..
10. Lamps	..	..	..	Yes	..	LP	..	..
11. Windshield Wiper	..	..	..	Yes	..	..	..	Yes
12. Electric Horns	..	..	..	Yes	..	LP	..	..
13. Wiring Harness	..	..	..	Yes	..	LP	..	..
14. Direction Indicator	..	..	..	..	..	..	..	..
Instrument and Gauges								
1. Dashboard Instrument	..	..	..	Yes	..	..	..	Yes
Body Panels and Steel Metal Parts								
1. Passenger car bodies	..	..	..	..	..	..	..	..
2. Bus Bodies	..	..	..	..	..	..	..	..
3. Cabs	..	1750	..	..	..	..	..	..
4. Truck Bodies	..	..	..	..	..	..	..	..
5. Mudguards	..	..	..	Yes	2560	4977	..	..
6. Seats, Runners etc.	..	..	..	..	4100	..	..	..

1	2	3	4	5	6	7	8	9
7. Doors & Locks	..	..	..	..	..	..	..	..
8. Wind Screen	..	..	..	..	..	4000	..	..
9. Windows	..	..	..	..	..	..	..	..
10. Windows handles & Regulator	..	..	..	..	..	..	..	..
11. Trimming & Upholstery Materials	..	..	..	..	LP	..	..	..
Tools & Accessories								
1. Tools Kits	..	..	..	Yes	LP	..	..	..
2. Starter	..	2000	..	..	LP	..	..	..
3. Tyre Lever	..	..	..	..	..	..	..	..
4. Jacks	..	..	..	Yes	LP	..	..	..
5. Tyre Inflators	..	..	..	..	..	..	..	..
6. Lubricating Equipments	..	..	..	..	..	..	..	..
7. Towing Cranes/Ropes & Rods	..	..	..	..	..	..	..	..

NOTE.—1. L. P. Indicates local purchase.

2. Manufactured by Gun Carriage Factory.

Component	Perkins P6 Engines				Meadows Engine			
	Manufactured in 1956	Manufactured upto 1959 *Cum.*	To be developed in the factory by 1961	To be obtained indigenously as and when sources devclop	Manufactured in 1956	Manufactured upto 1959 *Cum.*	To be developed in the factory by 1961	To be obtained indigenously as and when sources develop
1	2	3	4	5	6	7	8	9
Rubber Asbestos Parts Gaskets.								
1. Tyre & Tubes	..	..	..	..	..	..	..	..
2. Flape	..	..	..	..	..	..	..	..
3. Fanbelts houses etc.	LP	..	..	..	..	LP	..	..
4. Rubber Components etc.	LP	..	..	..	..	LP	..	..
5. Cylinder Head & other Gaskets	LP	..	..	..	..	..	..	Yes
Engine								
1. Cylinder Block	..	6624	..	..	..	..	Yes	..
2. Cylinder Head	..	15224	..	..	..	..	Yes	..
3. Crank Shaft	..	3956	..	..	..	..	Yes	..
4. Cam Shaft	..	2039	..	..	..	..	Yes	..
5. Connecting Rods	..	28437	..	..	..	592	..	.
6. Connecting Rod Belts	..	54875	..	..	..	592	..	..

1	2	3	4	5	6	7	8	9
Engine—contd.								
7. Fly Wheel	4025	16350	..	..	..	592	..	..
8. Starter Gear Ring	6	6744	..	..	..	592	..	..
9. Oil Pan	..	6312	..	..	..	592	..	..
10 ming Case	..	..	..	..	..	592	..	..
11. Tappets	1193	78755	..	..	..	592	..	..
12. Valves	..	..	..	Yes	..	..	..	Yes
13. Valve guides	342	93675	..	..	..	592	..	..
14. Valve Spring	..	..	Yes	..	..	..	Yes	..
15. Manifolds-Intake & Exhaust	300	18999	..	..	..	592	..	..
16. Water pump Assembly	440	8536	..	..	..	592	..	..
17. Ventilator & Ventilator Pulley	9407	19585	..	..	..	..	Yes	..
18. Fuel Tank with pipes etc.	..	..	..	..	..	..	..	..
19. Piston	LP	..	..	..	..	..	..	Yes
20. Piston Ring	LP	..	..	..	..	..	..	Yes
21. Piston Pin	LP	..	..	..	..	..	..	Yes
22. Cylinder Liners	LP	..	..	..	..	..	..	Yes
23. Tinning Gears	..	..	..	..	..	..	..	..
24. Carburetter Assembly	..	..	..	..	..	..	..	..
25. Fuel pump (Petrol)	..	..	..	..	..	..	..	..

26. Fuel injection Equipment (Diesel)	..	LP	..	..	..	..	..	Yes
27. Fuel Filter	..	..	..	Yes	..	..	..	Yes
28. Fuel Lines	37165	40454	..	..	..	..	..	..
29. Air Cleaner	..	..	..	Yes	..	..	..	Yes
30. Radiator Assembly	..	..	..	..	..	..	..	..
31. Exhaust Muffler & Pipes	3176	8084	..	..	..	..	..	..
32. Crank Shaft bearing	..	..	..	Yes	..	..	..	Yes
Electrical Equipments								
1. Dynamos	..	..	..	Yes	..	..	..	Yes
2. Starter Motors	..	..	..	Yes	..	..	..	Yes

NOTE :— L.P. indicates local purchase.

APPENDIX XI

PRODUCTION OF CARS & TRAILERS

Sl. No.	Name of car	PRODUCTION IN									
		1950	1951	1552	1953	1954	1955	1956	1957	1958	1959
1	Baby Hindustan . .	..	..	..	..	21	355	263	..	746	39
2	Fiat	..	..	..	37	574	2178	4085	3977	1226	4380
3	Standard 8/10 . . .	..	..	..	..	396	909	1411	1442	1129	1392
4	Hindustan Ambassador .	1275	2059	1112	1640	2330	3875	4825	4788	3833	5595
5	Standard Vanguard .	274	614	381	301	502	637	425	809	333	397
6	Dodge	Separate figures not available		414	307	634	1403	1637	896	617	79
7	Studebaker . . .	189	102	73	207	256	644	725	298	229	111
8	Others	4849	9610	4972	2444	722	265	295	1	..	..
	TOTAL . .	6587	12385	6952	4936	5435	10266	13666	12211	8113	11993

PRODUCTION OF TRAILERS (TRANSPORT & AGRICULTURE)

1957	*1958*	*1959* (*Provisional*)
1835	1920	1410

APPENDIX XII

PRODUCTION OF JEEPS AND COMMERCIAL VEHICLES DURING 1950—59

Sl. No.	Name and Type of the vehicle.	PRODUCTION IN									
		1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
1	2	3	4	5	6	7	8	9	10	11	12
1.	*Jeeps*										
	Jeeps	(Separate figures are not available. These are included in Trucks).				..	2671	3616	3450	2186	3800
	Jeep Utilities. . . .					1595	173	369	579	368	714
	Jeep truck . . .					..	..	304	569	568	708
	Others					317	481	40	1	996	154
	TOTAL JEEPS					1912	3325	4329	4599	4118	5376
2	*Light Weight Trucks* (1 *ton*) *Petrol* 4 × 2										
	Dodge	(Separate figures from 1950-53 are not available).				..	492	582	342	329	622
	Studebaker . .					..	406	277	80	5	..
3	*Medium Weight Trucks* ((3—5 *Tons*) 4 × 2										
	Dodge Petrol . .					3233	1884	1937	1315	463	393
	,, Diesel . . .					(Incl. of all types)	841	1027	2630	2782	3544
	,, ,, Conv. .						392	1739	833	223	2
	Studebaker Petrol .					1118	577	1470	323	168	..
	,, Diesel Conv. .					(Incl. of all types)	179	989	601	126	..
	Mercedes Benz . .					120	2338	1553	7401	7694	7880

1	2	3	4	5	6	7	8	9	10	11	12
	Medium Weight Trucks (3—5 *Tons*) 4×2—contd.										
	Bedford Petrol . .					..	..	..	..	37	791
	,, Diesel Conv.					..	..	..	..	..	2700
	Chevrolet Petrol . .					..	..	..	..	348	613
	,, Diesel Conv. .					..	..	..	..	..	259
	TOTAL LIGHT & MEDIUM WEIGHT VEHICLES .					4471	7109	13174	13525	12175	16804
4	*Heavy Weight* (5 *ton & above Diesel*)										
	Leyland Comet . .					..	581	642	881	1092	1395
	,, Titin . .					246	..	105	5	77	27
	,, Royal Tiger .					..	75	88	123	8	5
	TOTAL HEAVY VEHICLES .					246	656	835	1009	1177	1427
	Other Commercial Vehicles not under development .										
	Petrol . . .					..	9	11	379	12	2
	Diesel . . .					2398	245	123	750	36	..
	TOTAL COMMERCIAL VEHICLES (4×2) . .					7115	8019	14143	15663	10400	18233
	4×4 *Vehicles* :										
	1 ton Dodge . .					..	..	..	323	311	148
	,, Studebaker .					..	..	..	..	..	..

3 ton Dodge . .	..	276	..	129	99	698
„ Studebaker .	..	1198	..	133	747	20
„ Bedford .	..	..	..	..	..	..
„ Chevrolet .	..	..	..	..	..	..
„ Mercedes Benz	..	..	..	..	..	..
5 ton and above . .	..	..	..	..	..	..
Others . . .	..	..	..	..	..	..
TOTAL 4×4 . .	..	1474	..	585	1157	866
TOTAL COMMERCIAL VEHICLES (4×2 & 4×4) . .	8015	9884	8339	8990	7115	9493	14143	16248	14557	19099

NOTE :— 1. The exact break up 4×4 vehicles is not available for the years 1954 to 1957. It is shown separately from 1958. (Figures for 4×4 vehicles under columns 1955 to 1957 are Army Vehicles).

2. Figures of Medium Weight Trucks under columns 1954 to 1957 are inclusive of power wagons.

APPENDIX XIII

Prices of Vehicles from 1954 to 1959 (June)

Name & Type of Vehicles	1954 (Dec.)		1955 (Dec.)		1956 (Dec.)		1957 (Dec.)		1958 (Dec.)		1959 (Dec.)	
	Ex-Fac. price	List price	Ex-Fac. price	List price	Ex-Fac. price	List price	Ex-Fac. price	List price	Ex-Fac. price	List price	Ex-Fac. price	List price
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
CARS												
(1) Hindustan Baby . . .	7,180	8,975	7,100	8,435	7,180	8,435	7,612	8,373	7,612	8,373	7,638	8,399
(2) Fiat 1100	7,960	9,355	8,043	9,438	8,043	9,438	8,868	9,755	8,868	9,755	8,896	9,780
(3) Standard 10 . . .	..	..	8,043	9,450	8,043	9,450	8,591	9,450	8,591	9,450	8,621	9,480
(4) Hindustan Ambassador . .	8,380	10,475	8,380	9,845	8,380	9,845	10,146	11,161	10,146	11,161	10,506	11,554
JEEPS												
(1) C. J-3B	10,591	12,160	10,591	12,160	10,591	12,160	11,055	12,160	11,055	12,160	11,479	12,621
TRUCKS												
(1) Dodge 1 ton-116″ WB. .	10,520	13,150	10,805	12,606	10,805	12,606	10,805	11,615	12,284	13,205	13,769	14,701
TRUCKS—3/5 tons												
(1) Dodge 153″ W.B. Pet . .	15,120	18,900	14,760	17,170	14,903	17,258	15,057	16,186	17,826	19,163	..	..
(2) Dodge 165″ W.B. Diel. .	21,520	26,000	21,520	25,285	21,660	25,300	21,982	23,576	22,914	24,502	23,654	25,242
(3) Dodge 193″ Die. Conv. .	..	..	21,499	25,157	23,044	26,737	24,727	26,581	24,300	26,049	..	..
MERCEDES BENZ												
165″ W. B.	22,200	26,120	22,465	26,385	23,614	27,534	24,500	26,340	24,950	26,820	24,550	26,390

BEDFORD:															
167" W. B. Petrol	. . . ..	..	..	..	..	..	..	..	..	..	16,475	17,700	16,655	17,880
167" W. B. Diesel	. . . ..	..	..	..	..	..	..	..	..	..	..	..	22,180	23,842
CHEVROLET														
165" W. B. Petrol	. . . ..	..	..	..	..	..	..	..	..	..	18,500	19,900	..	..
165" W. B. Dies. Conv.	. . ..	..	..	..	..	..	..	..	..	..	..	..	..	..
LEYLAND COMET 163"	. ..	..	30,965	35,470	32,300	36,800	32,300	34,700	32,300	34,700	32,000	34,400
Tiger 197"	. ..	..	..	..	..	28,893	..	..	..	..	..	..
Worldmaster 195"	. ..	..	48,415	55,440	53,855	..	53,855	..	53,855	..	..	..

APPENDIX XIV

Specifications of Vehicles which are under Indigenous Manufacture/Assembly

	CARS								
	STANDARD 10		FIAT		HINDUSTAN		JEEPS		
	4 door 4 Seater Saloon	4 door Sedan	Delivery Van & Station Wagon	Pick ups	Ambassador 4 door Saloon	Hindustan Traveller	CJ-3B 4×4	4×4 Utility Wagon	1 ton Truck 4×4
1	2	3	4	5	6	7	8	9	10
ENGINE									
(1) No. of Cylinders	4		4		4-OHV	4-OHV	4	4	4
(2) Bore & Stroke (mm)	63×76		68×75		73·025×88·9	73·025×88·9	79·375×111·125	79·375×111·125	79·375×111·125
(3) Piston Displacement . .	948 c.c.		1089 c.c.		1489 c.c.	1489 c.c.	2200 c.c.	2200 c.c.	2200 c.c.
(4) Compression ratio	7 : 1		7·85 : 1		7·2 : 1	7·2 : ·1	6·9 : 1	6·9 : 1	6·9 : 1
(5) Horse Power—SAE	9·9		11		13·22	13·22	15·63	15·63	15·63
(6) Do. Brake (Max)	33 at 4500 rpm.		43 at 4800 rpm		50 at 4200 rmp.	50 at 4200 rpm.	75/4000 rpm.	75/4000 rmp.	75/4000 rpm.
(7) Torque ft/lbs. (Max)	550/2500 rpm.		..		74/3000 rpm.	74/3000 rpm.	114/2000 rpm.	114/2000 rpm.	114/2000 rpm.
GEAR BOX—Ratio .	1st & reverse	4·271	..		1st & reverse 3·807	1st 18·599 2nd 10·983	1st 2·798, 1·551 ; 1·0	1st 2·798, 1·551: 1·0	1st 2·798, 1·551 : 1·0
	2nd 2·46				2nd 2·253	3rd 7·342	Rev. 3·798	Rev. 3·798	Rev. 3·798

	3rd 1·454				3rd 1·506	4th 4·875	With Transfer case.	With Transfer case.	With Transfer case.
	Top 1·0				Top 1	Rev. 18·559			
REAR AXLE—Ratio	4·55 (9/41)		10/43		8/39	8/39	5·38 : 1	5·38 : 1	5·38 : 1
Wheel Base . .	84″	90″	89″	89″	97″	97″	80″	104½″	118″
Tread-Truck front & rear	4·042′	4·042′	4·467′	4·467′	4·458′	4·45′ ; 4·41′	4·04′ ; 4·04′	4·75; 4·75′	4·75′ ; 5·3′
Ground Clearance .	6½″	4·97″	6·296″	6·296″	6·25″	..	8·0″	8 1/8″	8 1/8″
Control . . .	Rt. hand drive	Rt. hand drive.			Rt. H. D.	Rt. H. D.	Lt. H. D.	Rt. H. D.	Rt. H. D.
Tyres Sizes . .	5·60 × 13	5·20 × 14			5·50 × 15	5·50 × 15	600 × 16 (6 ply)	700 × 15 (4 ply).	700 × 16 (6 ply.)
OVERALL DIMENSIONS									
Length . .	12·083′	12·795′	14·299′	14·299′	14·25′	14·08′	10·75′	14·69′	15·3′
Width . .	4·833′	4·784′	5·841′		5·417′	5·417′	5·74′	6′	6·12′
Height . .	5·0′	4·716′	6·608′		5·25′	5·25′	5·65′	6·17′	6·20′
WEIGHT OF THE VEHICLE (Complete)	15 Cwt. (1680 lbs.)	1940 lbs.	2756 lbs.	2690 lbs.	2499 lbs.	2632 lbs.	3500 lbs.	4500 lbs.	6000 lbs.
						F. Axle cap	2000 lbs.	2000 lbs.	2000 lbs.
						R. Axle cap	2500 lbs.	3700 lbs.	4500 lbs.

SPECIFICATIONS	LEYLAND COMET 163" W.B.	LEYLAND ROYAL TIGER AND TITAN 197" W.B.	TATA MERCEDES BENZ 165" W.B.	BEDFORD 167" W.B.	DODGE 4×2 (with P6 engine) 165" W.B.
1	2	3	4	5	6
ENGINE					
(1) No. of Cylinders	6	6	6	6	6
(2) Bore and Stroke in mm. . .	100·6×120·7	121·9×139·7	90×120	88·9×127	88·9×127
(3) Piston Displacement—c.c. . .	5752	9785	4580	4729·22	4729·22
(4) Compression ratio . . .	16 : 1	15·75 : 1	19·5 : 1	16 : 1	16 : 1
(5) Rated Horse Power . . .	37·6	..	30·2	29·4 (AMA rating)	29·4 (AMA rating)
(6) Brake Horse Power—max. . .	100 at 2200 rpm.	125 at 1800 rpm.	110/3000 rpm.	83/2400 rpm.	83/2400 rpm.
(7) Torque—max	255/1400 rpm.	410 at 900 rpm.	218/1500 rpm.	204/1500 rpm.	204/1500 rpm.
CLUTCH	Single Plate Dry Disc.	Single Plate Dry Disc.	Single Plate Dry Disc.	Single Plate Dry Disc.	Single Plate Dry Disc.
GEAR BOX					
Type	Synchromesh	Synchromesh (Pneumo Cyclic is also available).	..	Conventional	Sliding gear type.
No. of speeds	Forward 5 Reserse 1	Forward 4 Reverse 1	Forward 5 Reverse 1	Forward 4 Reverse 1	Forward 5 Reverse 1
Ratio	6·988, 4·308, 2·655, 1·605, 1 Rev. 6·343	4·95 ,2·63, 1·59, 1·00 Rev. 4·6	7·37, 4·23, 2·49, 1·56 & 1 Rev. 7·75	1st & Rev. 7·059 2nd 3·382; 3rd 1·711; 4th 1·00	7·08, 3·78, 2·24, 1 Rev. 7·01

GEAR AXLE RATIO—H. speed	4·89 or 5·62	4·8, 3·4 & 6·5 or			
L. speed	6·80, 7·81	4·8, 5·4 & 6·25	1 : 6·857	5·8 & 6·8 : 1	..
SUSPENSION	Leaf Springs (ft. with Hyd. Shock Absorbers).	Semi elliptical	Semi elliptical	Semi elliptical	Semi elliptical
BRAKES	Hyd. with Servo Booster.	Vacuum cylinder	Hyd. with Booster	Hyd. with Servo	..
TRACK—Front & Rear	69·2″, 68″	..	67″	73·3″ (outer)	67″, 67½″
ROUND CLEARANCE OVERALL—DIMENSION	10·25″	..	10·1/32″	15″	10″
Length	22′ 5″	27′ 6″	23′ 11″	21′ 11″	21′ 9½″
Width	7′ 4½″	..	7′ 3″	7′ 2″	7′ 3½″
WEIGHT OF THE VEHICLE (Gross laden wt.)	22,800 lbs.	29,120 lbs.	19,000 lbs.	19,500 lbs.	19,000 lbs.
CAPACITY—Front Axle	8,960 lbs.	9,710 lbs.	6,225 lbs.	6,000 lbs.	7,000 lbs.
Rear Axle	17,920 lbs.	19,420 lbs.	6,225 lbs.	17,000 lbs.	15,500 lbs.
TYRES—Front	900 × 20 (12 ply.)	11·00 × 20 (12 ply.)	..		
Rear	1,000 × 20 (12 ply.)	10·00 × 20 (12 ply.)		8·25 × 20 (12 ply.)	8·25 × 20 × (12 ply.)
OTHER WHEEL BASES AVAILABLE	..	210″	126″ ; 141¾″, 190″	132½″ ; 156½″ 174½″ 196¾″, 216″	190″

APPENDIX XV

Statement showing the current rates of import duties on motor vehicles and their components

Item No.	Name of article	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of U. K.	Remarks
1	2	3	4	5
75	Conveyances, not otherwise specified and component parts and accessories thereof other than parts and accessories of motor vehicles and batteries and articles specified in item No. 75 (12A) also motor vans and motor lorries imported completely assembled.	35 per cent *ad valorem*.	..	(1) Under Government of India, Ministry of Finance (Revenue Division), Notification No. 167—Customs, dated the 15th October, 1955 as subsequently amended by Ministry of Finance (Dept. of Revenue), Notification No. 108-Customs, dated the 16th May, 1957, articles specified in the Schedule noted below are exempt from the payment of so much of the Customs duty leviable thereon as is in excess of 20 per cent. *ad valorem*. SCHEDULE 1. Trucks, propelled by self-contained power, designed principally for loading, unloading, stacking, or tiering of goods, and counter-weighted or designed to be counter-weighted at the steering axle and to enable loads to be handled on forks or other attachments to elevating masts at the driving axle and including any of the following equipment or attachments imported with and for use with such trucks, *viz.*, special forks crane attachment, boom attachment, scoop attachment, roll-over or revolving head attachment, drum carrying attachment, side shifting attachment, squeeze gripping attachment, steady attachment, or clamp lift, brick forks, bale carrying attachment, platform attachment, drum handling attachment, coal grab attachment, push pull attachment, pusher attachment, case grab attachment and end or side dumping skip.

				2. Trucks, elevating platform propelled by self-contained power, and with platform elevation not exceeding 12 inches. (2) Under Government of India, Ministry of Finance (Deptt. of Revenue), Notification No. 209-Customs, dated the 18th Sept. 1957, every mobile crane, having carriage which forms integral parts of the crane falling under this item is exempt from the payment of so much of the customs duty leviable thereon as is in excess of 20 per cent *ad valorem*.
75 (1) (GATT ITEM)	Motor cars, including taxi cabs, imported completely assembled.	75 per cent *ad valorem* or Rs. 6,000 per car or cab, whichever is higher.		Under Government of India, Ministry of Finance (Revenue Division), Notification No. 144-Customs, dated the 3rd September, 1955, three-wheeled motor vehicles as mentioned below are exempt from the payment of so much of the Customs duty leviable thereon as is in excess of 75 per cent *ad valorem*: — (1) Auto Rickshaw; (2) Relian· 'Regent' and Reliant Auto-4 Seater Rickshaw; (3) Bond Minicar; (4) Fend's Motor Cart; (5) Fend Rickshaw; and (6) Fend Kabinenroller.
75(3)	Motor omnibuses imported completely assembled. NOTE.—Motor vehicles, other than motor cycles and motor scooters, when imported otherwise than in a completely assembled condition, shall be dutiable as articles or parts of articles under Item No. 75(9), 75(10), 75(11), 75(12), 75(12A), 75(14), 75(15), 75(16), 74(18)(B), as the case may be.	32½% *ad valorem.*	25% *ad valorem.*	

1	2	3	4	5
75(9) (GATT ITEM)	The following articles and parts thereof adapted for use as parts and accessories of motor vehicles other than motor cycles and motor scooters :— (*i*) the following engine components; rubber mountings, hospipes (other than fuel line hoses) with connection, fuel pump diaphragms, fan belts, mufflers, exhaust pipes and tail pipes; (*ii*) the following frame and body components; carpets (made to size or shape), cushion springs, door and window fittings, excluding glasses, trim materials (leather, plastic, jute canvas and leather, cloth), made to size or shape, bus bodies, station wagon bodies, truck bodies, steel cabs for lorries, pick up bodies and parcel van bodies; and (*iii*) the following other components; gaskets all sorts, rubber components, not otherwise specified and horns not otherwise specified.	50 per cent. *ad valorem*		(1) Under Government of India , Ministry of Finance (Revenue Division), Notification No. 42-Customs, dated the 31st May, 1953, articles and parts thereof adapted for use as parts and accessories of motor vehicles, *other than* motor cycles and motor scooters, if of the U.K. manufacture, are exempt from the payment of so much of the Customs duty leviable thereon as is in excess of 42½ per cent. *ad valorem*, provided that the said articles are not also adapted for use as parts and accessories of motor cars including taxi cabs. (2) Under Government of India, Ministry of Finance (Deptt. of Revenue), Notification No. 264-Customs, dated the 11th Oct. 1958, component parts (other than frames, petrol tanks, silencers and pistons) of (*i*) three wheeled auto-rickshaw, and (*ii*) three-wheeled vehicles mounted on the chassis of such auto-rickshaws and adapted for the conveyance of goods when imported in C.K.D. packs for assembly are exempt from the payment of so much of the customs duty leviable thereon as is in excess of the duty of— (*i*) 22½% *ad valorem*, where the standard rate of duty is leviable, and (*ii*) 15 per cent. *ad valorem*, where the preferential rate of duty is leviable. (3) Under Government of India, Ministry of Finance (Revenue Division), Notification No. 120-Customs, dated 1st December, 1956, as subsequently amended by Notification No. 108-Customs, dated the 16th May, 1957, articles specified in the first column of the Schedule noted below are exempt from the payment of so much of the Customs duty leviable thereon under the Indian Tariff Act, 1934, as is in excess of— (*i*) where the standard rate of duty is leviable, the

rates specified in the corresponding entry in the second column of the said Schedule;

(*ii*) where the preferential rate of duty is leviable, the rates specified in the corresponding entry in the third column of the said Schedule;

SCHEDULE

Name of the article	Standard rate of duty	Preferential rate of duty if the article is the manufacture of the United Kingdom
Component parts of scooters (other than wheels, handle bars and saddles) but including such component parts as are also adapted for use as parts and accessories of other motor vehicles, imported in C.K.D. packs for assembly.	22½ per cent. *ad valorem.*	15 per cent. *ad valorem.*

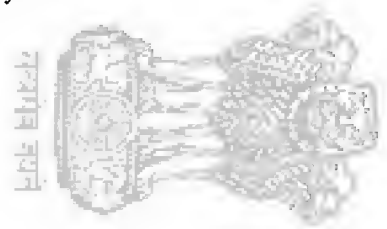
(4) Under Government of India, Ministry of Finance (Revenue Division), Notification No. 120 Customs, dated 1st December 1956, as subsequently amended by Notification No. 147-Customs, dated the 1st December, 1956 and Notification No. 108 Customs, dated the 16th May, 1957, component parts of motor cycles (other than frames, petrol tanks, silencers, pistons and saddles) including such component parts as are also adapted for use as parts and accessories of other motor vehicles imported in

1	2	3	4	5
				C. K. D. packs for assembly are exempt from the payment of so much of the Customs duty leviable thereon as is in excess of the duty of— (*i*) 22½ per cent. *ad valorem*, where the standard rate of duty is leviable ; and (*ii*) 15 per cent. *ad valorem*, where the preferential rate of duty is leviable.
75 (10) (GATT ITEM)	The following articles, and parts thereof, adapted for use as parts and accessories of motor vehicles other than motor cycles and motor scooters : (*i*) the following engine components : crankshafts, cam shafts, connecting rods, cylinder blocks and heads, manifolds, valves, valve springs, valve tappets, fly wheels, petrol tanks, radiators, fans, piston assembly, pistons, piston rings and gudgeon pins, other than those specified in Item No. 75 (12)(A) water pumps, timing gears and sprockets ; (*ii*) the following electrical components : lamps other than head lamps, wire harness, battery and other cables made to size and horns ; (*iii*) the following transmission and suspension components : king pins, shackle pins, shock absorbers, spring hanger brackets, shackles transmission gear and gear box, clutch housing propeller shafts, universal joints,	50 per cent. *ad valorem*.	75(10) & 75(11)	(1) Under Government of India, Ministry of Finance (Revenue Division), Notification No. 42-Customs, dated the 31st May, 1953 articles and parts thereof adapted for use as parts and accessories of motor vehicles, other than motor cycles and motor scooters, falling under Item Nos. 75 (10) and 75 (11) if of the U. K. manufacture, are exempt from the payment of so much of the Customs duty leviable under the said items as is in excess of the rates specified in column 2 of the Schedule below : Provided that the said articles are not also adapted for use as parts and accessories of motor cars including taxi cabs. SCHEDULE Item No. (1) — Reduced preferential rates (2) 75 (10) — 42½ per cent. *ad valorem*. 75 (11) — 17½ per cent. *ad valorem*. (2) Under Government of India, Ministry of Finance (Deptt. of Revenue) Notification No. 264-Customs,

	including cable bearings therefor, rear axle assembly (axle housing, axle shaft, ring gear pinion and carrier differential), front axles, hubs and brake drum and front suspension excluding coil springs ; (*iv*) the following frame and body components : seat runners, short members of chassis frame and brackets ; and (*v*) the following other components : brake hose pipes, bushings separately imported (excluding oil impregnated bushings) and bumpers.	dated 11th October, 1958 component parts (other than frame petrol tanks, silencers and piston (*i*) three wheeled auto-rickshaws, and (*ii*) three wheeled vehicles mounted on the chassis of such auto-rickshaws and adapted for the conveyance of goods when imported in C.K.D. packs for assembly are exempt from the payment of so much of the Customs duty leviable thereon as is in excess of the duty of— (*i*) 22½ per cent. *ad valorem*, where the standard rate of duty is leviable, and (*ii*) 15 per cent. *ad valorem* where the preferential rate of duty is leviable.
75 (11) (GATT ITEM)	The following articles and parts thereof adapted for use as parts and accessories of motor vehicles other than motor cycles and motor scooters, namely: (*i*) the following engine components : thin wall bearings, cylinder liners, carburettors, oil pumps, air cleaners, oil filters, fuel pumps and fuel line hoses with connections ; (*ii*) the following electrical components : distributors, sparking plugs not otherwise specified, direction indicators, electrical panel instruments, windshield wipers, starting motors, generators, head lamps including sealed beams, fuses, switches, ignition coils and voltage and current regulators ;	(3) Under Government of India, Ministry of Finance (Revenue Division) Notification No. 120-Customs, dated 1st December, 1956 as subsequently amended by Notification No. 108 Customs, dated the 16th May, 1957 articles specified in the first column of the schedule noted below are exempt from the payment of so much of the Customs duty leviable thereon under the Indian Tariff Act, 1934, as is in excess of— (*i*) Where the standard rate of duty is leviable, the rates specified in the corresponding entry in the second column of the said Schedule ; and (*ii*) Where the preferential rate of duty is leviable, the rates specified in the corresponding entry in the third column of the said Schedule.

(1)	(2)	(3)	(4)	(5)

(*iii*) the following transmission and suspension components ; steering mechanisms, pressed wheel clutches and suspension coil springs :
(*iv*) the following frame and body components toughened Glass Sheets, and long members of chassis frames ; and
(*v*) the following other components; Roller Bearings, Bushings (Oil impregnated), panel instruments other than electrical and Brake Cylinders.



SCHEDULE

Name of article	Standard rate of duty	Preferential rate of duty if the article is the manufacture of the United Kingdom
1	2	3
Components parts of scooters (other than wheels, handle bars and saddles including such component parts as are also adapted for use as parts and accessories of other motor vehicles, imported in C. K. D. packs for assembly.	22½ per cent *ad valorem.*	15 per cent *ad valorem.*

(4) Under Government of India, Ministry of Finance (Departmtment of Revenue), Notification No. 120 Customs dated the 1st December 1956 as subsequently amended by Notification No. 147-Customs' dated the 1st December, 1956 and No. 108-Customs, dated the 16th May, 1957 component parts of Motor Cycle (other than frames, Petrol Tanks, Silencer, Pistons and Saddles) including such component parts and accessories of other Motor vehicles imported in C. K. D. packs for assembly are exempt from the payment of so much of the

customs duty leviable thereon as is in excess of the duty of—

(i) 22½ per cent *ad valorem* where the standard rate of duty is leviable ; and

(ii) 15 per cent *ad valorem* where the preferential rate of duty is leviable.

75 (12) (GATT) item.	Articles other than rubber tyres, tubes batteries and such other components as are specified in Items Nos. 75 (9), 75 (10), 75 (11), 75 (14), 75 (15), 75 (16) and 75 (18) (*b*) adapted for use as parts and accessories of motor vehicles other than motor cycles and motor Scooters.	25 per cent *ad valorem*.	(1) Under Government of India, Ministry of Finance (Revenue Division), Notification No. 42-Customs, dated the 31st May, 1953 articles and parts thereof adapted for use as parts and accessories of motor vehicles, *other than* motor cycles and motor scooters falling under Item No. 75 (12) if of the U. K. manufacture, are exempt from the payment of so much of the Customs duty leviable under the said items as is in excess of 17½ per cent *ad valorem*. Provided that the said articles are not also adapted for use as parts and accessories of motor cars including taxi cabs. (2) Under Government of India, Ministry of Finance (Revenue Division), Notification No. 264-Customs, dated the 11th October 1958, component parts (other than frames, petrol tanks, silencers and pistons) of three-wheeled auto-rickshaws, and three-wheeled vehicles mounted on the chassis of such auto-rickshaws and adapted for the conveyance of goods when imported in C.K.D. packs for assembly, are exempt from the payment of so much of the Customs duty leviable thereon as is in excess of the duty of :— (i) 22½ per cent *ad valorem*, where the standard rate of duty is leviable; and (ii) 15 per cent *ad valorem*, where the preferential rate of duty is leviable ;

(1)	(2)	(3)	(4)	(5)

(3) Under Government of India, Ministry of Finance (Revenue Division), Notification No. 120-Customs, dated the 1st December, 1956 as subsequently amended by Notification No. 108-Customs, dated the 16th May, 1957 articles specified in the first column of the Schedule noted below are exempt from the payment of—

so much of the Customs duty leviable thereon under the Indian Tariff Act, 1934, as is in excess of—

(*i*) where the standard rate of duty is leviable the rates specified in the corresponding entry in the second column of the said Schedule ;

(*ii*) where the preferential rate of duty is leviable the rates specified in the corresponding entry in the third column of the said Schedule ;

SCHEDULE

Name of Article	Standard rate of duty	Preferential rate of duty if the article is the manufacture of the United Kingdom
1	2	3
Component parts of scooters (other than wheels, handle bars and saddles), in-	22½ per cent. *ad valorem.*	15 per cent. *ad valorem.*

			cluding such component parts as are also adapted for use as parts and accessories of other motor vehicles imported in C. K. D. packs for assembly.
			(4) Under Government of India, Ministry of Finance (Revenue Division), Notification No. 120-Customs, dated the 1st December, 1956, as subsequently amended by Notification No. 147-Customs, dated the 1st December, 1956 and No. 108 Customs dated 16th May, 1957 component parts of motor cycles (other than frames, petrol tanks, silencers, pistons and saddles) including such component parts as are also adapted for use as parts and accessories of other motor vehicles imported in C.K.D. packs for assembly, are exempt from the payment of so much of the Customs duty leviable thereon as is in excess of the duty of— (*i*) 22½ per cent *ad valorem*, where the standard rate of duty is leviable ; and (*ii*) 15 per cent *ad valorem*, where the preferential rate of duty is leviable ;
75 (12-A)	The following articles adapted for use as parts and accessories of internal combustion engines of all kinds but excluding such articles as are adapted for use exclusively as parts and accessories of internal cumbustion engines of agricultural tractors and aeroplanes, namely : Trunk piston assembly of diameter 6 inches and below, trunk pistons of diameter 6 inches and below, trunk piston rings (excluding chromium plated rings) of diameter	50 per cent *ad valorem*.	.. Under Government of India, Ministry of Finance (Revenue Division), Notification No. 198-Customs, dated the 24th December, 1955, articles falling under this item, if of the United Kingdom manufacture, are exempt from the payment of so much of the Customs duty leviable thereon as is in excess of 42½ per cent. *ad valorem*. Provided that the said articles are adapted for use exclusively as parts and accessories of motor vehicles other than motor cars including taxi cabs.

(1)	(2)	(3)	(4)	(5)
	6 inches and below and gudgeon pins for trunk pistons of diameter 6 inches and below.			
75 (14)	Body panels including turret tops and sides for passenger motor cars including taxi cabs.	40 per cent *ad valorem.*		
75 (15)	Leaf springs and parts thereof, adapted for use as parts and accessories of motor vehicles other than motor cycles and motor scooters.	50 per cent *ad valorem.*		Under Government of India, Ministry of Finance (Revenue Division), Notification No. 42-Customs dated the 31st May, 1953, as subsequently amended by Notification No. 172-Customs, dated the 23rd December, 1954, leaf springs and parts thereof, adapted for use as parts and accessories of motor vehicles *other than* motor cycles and motor scooters if of the U.K. manufacture, are exempt from the payment of so much of the Customs duty leviable thereon, as is in excess of 42½ per cent *ad valorem*, provided that the said articles are not also adapted for use as parts and accessories of motor cars including taxi cabs.
75 (16)	The following articles and parts thereof, adapted for use as parts and accessories of motor vehicles but excluding such articles and parts thereof as are adapted for use exclusively as parts and accessories of agricultural tractors, namely :—	92½ per cent. *ad valorem.*		(1) Under Government of India, Ministry of Finance (Revenue Division), Notification No. 196-Customs, dated the 24th December, 1955, sparking plugs of the kind falling under this item, if of the United Kingdom manufacture, are exempt from the payment of so much of the Customs duty leviable thereon as is in excess of 85 per cent *ad valorem.*
	Sparking plugs of 14 mm. and 18 mm. sizes, including the resister type but excluding integrally screened types.			Provided that the said articles are not also adapted for use as parts and accessories of motor cars including taxi cabs.

			(2) Under Government of India, Ministry of Finance (Revenue Division), Notification No. 292-Customs dated the 30th November, 1958, insulators (not fitted with Central electrodes) for use in the manufacture of sparking plugs falling under this item are exempt from the payment of Customs duty leviable thereon. This Notification shall be in force only upto and inclusive of the 29th May, 1959.
75 (17)	Hand operated tyre inflators and connection and parts thereof adapted for use as accessories of motor vehicles.	45 per cent *ad valorem.*	
75 (13)	(*a*) Single cyclinder fuel injection pumps for stationary diesel engines, and component parts of such pumps.	25 per cent. *ad valorem.*	
	(*b*) Nozzle holders with a clamping capacity upto 1 inch clamping diameter for nozzles (automizers) for use on stationary or automobile diesel engines and nozzles therefor; and component parts of such nozzles and nozzle holders.	25 per cent *ad valorem.*	(*b*) Under Government of India, Ministry of Finance (Revenue Division), Notification No. 146-Customs, dated the 7th September, 1955, as subsequently amended by Notification No. 194-Customs, dated the 24th December, 1955, and Ministry of Finance (Deptartment of Revenue), Notification No. 320-Customs, dated the 27th December, 1957, nozzle holders with a clamping capacity upto 1 inch clamping diameter of nozzles (automizers) and nozzles therefor and component parts of such nozzles and nozzle holders falling under this item, if of the U. K. manufacture, are exempt from the payment of so much of the customs duty leviable thereon as is in excess of 17½ per cent *ad valorem.* Provided that the said articles are not also adapted for use as parts and accessories of motor cars including taxi cabs.

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